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GROUND WATER & ENVIRONMENTAL GEOLOGISTS
ESTABLISHED 1947

April 29, 2002

Dave Andresen
20538 97th Ave S
Kent, WA 98031

Subject: Review of Deep Well Pumping Test and Well Rating

Dear Mr. Andresen:

We have reviewed the Water Well Report for the Olympic Canal Tracts well and the data collected during the 40-hour pumping test performed by Arcadia Drilling, Inc. Per your request, our primary focus has been to evaluate the pumping test data in an effort to determine an appropriate production rating for the well.

A shut-in pressure reading taken on April 2, 2002 indicated the non-flowing static water level was 5.1 feet above land surface (2.2 psi). Prior to testing on April 5, the well was free flowing at approximately 5.5 gpm. A semi-logarithmic plot of the water level drawdown response in the well is presented in Figure 1. After 10 minutes, the effects of well hydraulics become minimal and the drawdown slope decreases, reflecting aquifer characteristics. This initial slope, seen in Figure 1 between 20 minutes and 190 minutes reflects a near-well aquifer transmissivity on the order of 700 gallons/day/foot (gpd/ft). After 190 minutes of pumping, the drawdown curve steepens somewhat, reflecting a negative boundary condition that leads to an implied aquifer transmissivity of roughly 400 gpd/ft. After 600 minutes of pumping, the drawdown slope steepens again, indicating an implied transmissivity on the order of 200 gpd/ft. This slope was maintained throughout the remainder of the test. These are relatively low transmissivity values that indicate poor water transmission capacity in the rock aquifer. Figure 2 is a semi-logarithmic plot of the ratio of $t:t'$ (the ratio of the time since pumping began, t , to the time since pumping ceased, t') versus the recovering water levels; selected actual elapsed recovery times are indicated for reference. The indicated near-well transmissivity from this plot is on the order of 450 gpd/ft.

The primary utility of presenting recovery data in the manner shown in Figure 2 is that it provides a means of evaluating whether the production rate of the pumping test exceeded the volume of natural recharge to the system. When the recovery slope is projected to the left side of the page of this type of plot, it should cross the y-axis at a point roughly coincident with the pre-test static water level. If the projection points to a location substantially above the pre-test static, additional induced recharge to the system is inferred. Similarly, if the projection points below the pre-test static, some overdraft of the system is implied. On Figure 2, the projection of the data from 12 to 72 hours crosses the y-axis at the measurement point at the top of casing.

It should be noted that full recovery to the pre-test condition took more than twice the pumping period (see Figure 2). It is unclear, however, what implications this may have for long-term production from the well. This uncertainty arises because analysis of the test data was complicated

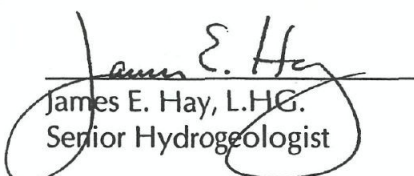
by the fact that, once the test pump was installed, the well flowed overnight (12+ hours) prior to the initiation of testing. As such, the 40-hour constant-rate test documented herein was initiated at the end of a (12+ hour) constant-head test.

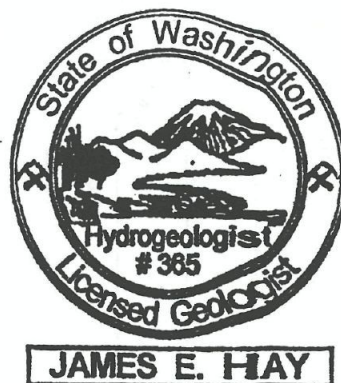
Projecting the late-stage drawdown data from the test suggests that after 100 days of (continuous) production, the pumping water level would drop to approximately 176 feet below the top of casing. In our experience, regularly using appreciably more than 100 feet of drawdown can result in well problems and complicate the long-term maintenance and operation of wells. The test data suggests that your well is capable of producing 16 gpm (continuously) for a period of 100-days with a pumping water level of approximately 100 feet (a design drawdown of 103.5 feet) below top of casing (plus or minus any seasonal variations). The test also demonstrates that the well is capable of short-term, higher production rates of at least 40 gpm, provided the average long-term production does not exceed 16 gpm.

It is not uncommon for wells completed in fractured rock aquifers to have problems with declining water levels and decreasing yield over time. Although Figure 2 does not specifically indicate dewatering is an issue in this setting at this time, the sluggish water level recovery indicates that regular monitoring of water levels should be accomplished. One or two sounding tubes should be installed with the permanent pump to facilitate water level measurement. At a minimum, weekly water-levels should be measured and recorded, preferably when the well has had an opportunity to rest for a minimum of 8 hours. Should the water level be above the top of the casing, a shut-in pressure should be recorded. The second sounding tube could be instrumented with a transducer and datalogger system that would automate this monitoring process, however the collected data would still need to be reviewed regularly. This monitoring equipment would likely cost on the order of \$1,500 to \$1,800 to purchase, dependent upon the length of cable and type/model of unit selected. If so desired, we could assist you in selecting and installing such equipment. The wellhead (including pressure-gauge, sounding tubes, and any installed instrumentation, should be designed to preclude uncontrolled free flow.

We hope that this analysis is of use and would be pleased to provide further assistance, as necessary. Please feel free to contact us with any questions or comments you may have.

Respectfully submitted,
Robinson & Noble, Inc.


James E. Hay, L.H.G.
Senior Hydrogeologist



Cc: Bill Neal, Arcadia Drilling
Jim Parker, Jefferson County PUD

Enclosures

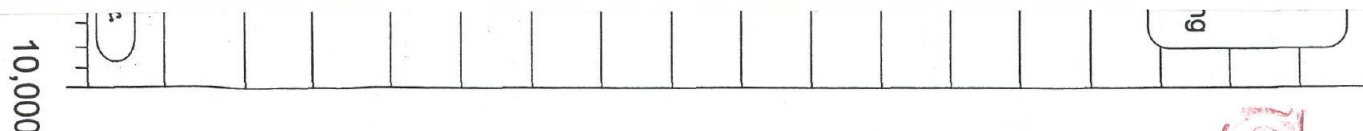


Figure 2

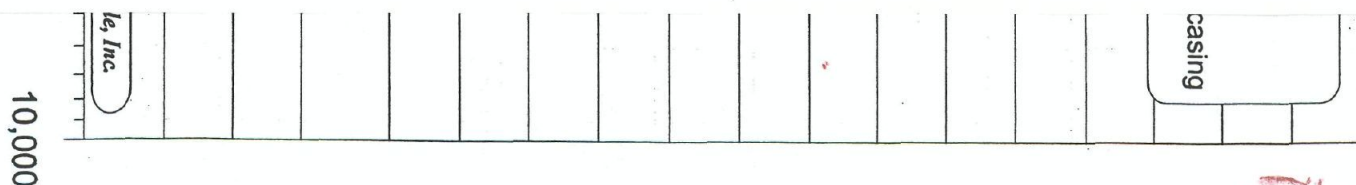


Figure 1

ENCL 16

information submitted to Ecology, it is unclear precisely when these samples were collected. Consequently on 5/22/02 I spoke with Bill Neal of Arcadia Well Drilling. Mr. Neal indicated that they performed a 20 minute drawdown test the morning of 4/4/02. Following this short test, the well recovered slowly. The constant rate test was apparently started at about noon on 4/4/02, and concluded at about 4:30 AM on 4/6/02 (although these times contradict some information submitted). Apparently samples were collected roughly 60 minutes, 12 hours, and 24 hours into pumping, as well as near the conclusion of 40 hours of pumping. The sample taken after 24 hours had a full analysis. The chloride concentrations of the samples collected ranged from 132 to 138 mg/l. The good news is that these levels remained relatively unchanged during the test.

As for your question regarding what type of information would be helpful for Ecology to make a decision, I will make several suggestions. Firstly, I suggest perhaps using Stiff diagrams, etc. in order to analyze inorganic data collected to see if this indicates that the high chloride concentrations observed were the result of hard water (associated with the basalt) or saltwater intrusion. Secondly, it would be helpful to monitor water use and water level (monthly) in the immediate area and to collect water samples for chloride analyses (perhaps quarterly) to measure the response to various pumping rates and seasonal recharge changes.

Additionally, questions remain about the production capacity of the subject well and aquifer. During the aquifer test, the well was still 12.5 feet below full recovery 72 hours after the pump was shut off. Conversely, Mr. Andresen indicated that artesian pressure during prevented them from forcing the drill stem downward. If the subject aquifer were really under artesian pressure, this might indicate an increased ability to keep seawater intrusion at bay. The fact that the well did not recover fully following the pumping test, however, suggests alternate conditions. It has been quite a while since I looked at the data, but it may be prudent to plot the water-level data collected versus the tide changes to see if those had any bearing on the failure of the well to fully recover. I expect, however, that you would have noted a cyclical pattern in the water-level or chloride data if they were the case. In short, any refinement of the production capacity of the aquifer would help Ecology when we do make a water right decision.

In summary, the proximity of the subject well to the coast, the high chloride concentrations in the water samples collected, and the failure of the subject well to recover fully, all suggest that this well may be at risk of seawater intrusion. As such, it can be anticipated that increased water production from this well likely would lead to additional seawater intrusion. Nonetheless, it is difficult to predict exactly how the subject aquifer might respond to increasing ground water withdrawals. At a minimum, therefore, if Ecology does ultimately approve this application, it seems

likely that we would require the system to collect monthly water-use and water-level data, and quarterly chloride data, while this application was in the permit stage, so that we could analyze this prior to that permit going to certificate. Other than that and what I have indicated above, however, I am very open to other suggestions that you might have in order to ascertain the risk of seawater intrusion.

Sincerely,
Tom Culhane
Hydrogeologist
Department of Ecology
Water Resources Program



RCW 90.44.050**Permit to withdraw.**

After June 6, 1945, no withdrawal of public ground waters of the state shall be begun, nor shall any well or other works for such withdrawal be constructed, unless an application to appropriate such waters has been made to the department and a permit has been granted by it as herein provided: EXCEPT, HOWEVER, That any withdrawal of public ground waters for stock-watering purposes, or for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area, or for single or group domestic uses in an amount not exceeding five thousand gallons a day, or for an industrial purpose in an amount not exceeding five thousand gallons a day, is and shall be exempt from the provisions of this section, but, to the extent that it is regularly used beneficially, shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter: PROVIDED, HOWEVER, That the department from time to time may require the person or agency making any such small withdrawal to furnish information as to the means for and the quantity of that withdrawal: PROVIDED, FURTHER, That at the option of the party making withdrawals of ground waters of the state not exceeding five thousand gallons per day, applications under this section or declarations under RCW 90.44.090 may be filed and permits and certificates obtained in the same manner and under the same requirements as is in this chapter provided in the case of withdrawals in excess of five thousand gallons a day.

[1987 c 109 § 108; 1947 c 122 § 1; 1945 c 263 § 5; Rem. Supp. 1947 § 7400-5.]

NOTES:

Purpose -- Short title -- Construction -- Rules -- Severability -- Captions -- 1987 c 109: See notes following RCW 43.21B.001.

INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196 M	System Name: OLYMPIC CANAL TRACTS ADDN 1		
Lab/Sample No: 089 54608	Date Collected: 4-6-02	DOH Source No: WA	
Multiple Source Nos: NA	Sample Type: B	Sample Purpose: B	
Date Received: 4-9-02	Date Reported: 4-11-02	Supervisor: GPS	
County: JEFFERSON	Date Digested: NA	Group: (A) B Other	
Sample Location: NEW WELL (4:30 PM) ← should be A.M. per conversation w/ Bill Neal 5/22/02		Remarks: A A 004 R This would be about 40 hours into pumpin SE	
Send Results & Bill To: ARCADIA DRILLING			
170 SE WALKER PARK RD			
SHELTON WA 98584			

DOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst	
EPA REGULATED							Trigger?	MCL?		
4	Arsenic	NA	mg/l	0.01	0.05	0.05			3113B	
5	Barium	↓	mg/l	0.1	2	2			3113B	
6	Cadmium	↓	mg/l	0.002	0.005	0.005			3113B	
7	Chromium	↓	mg/l	0.01	0.1	0.1			3113B	
11	Mercury	↓	mg/l	0.0005	0.002	0.002			3112B	
12	Selenium	↓	mg/l	0.005	0.05	0.05			3113B	
110	Beryllium	↓	mg/l	0.003	0.004	0.004			3113B	
111	Nickel	↓	mg/l	0.04	0.1	0.1			3111B	
112	Antimony	↓	mg/l	0.005	0.006	0.006			3113B	
113	Thallium	↓	mg/l	0.002	0.002	0.002			3113B	
116	Cyanide	↓	mg/l	0.05	0.2	0.2			4500-CNF	
19	Fluoride	↓	mg/l	0.2	2	4			4110B	
114	Nitrite - N	↓	mg/l	0.5	0.5	1			4110B	
20	Nitrate - N	↓	mg/l	0.5	5	10			4110B	
161	Total Nitrate/Nitrite	↓	mg/l	0.5	5	10			4110B	
EPA REGULATED (Secondary)										
8	Iron	NA	mg/l	0.1	0.3	0.3			3111B	
10	Manganese	↓	mg/l	0.01	0.05	0.05			3111B	
13	Silver	↓	mg/l	0.01	0.1	0.1			3111B	
21	Chloride	132	mg/l	20	250	250	NO	NO	4110B	GPS
22	Sulfate	NA	mg/l	10	250	250			4110B	
24	Zinc	↓	mg/l	0.2	5	5			3111B	
STATE REGULATED										
14	Sodium	NA	mg/l	5					3111B	
15	Hardness	↓	mg/l	10					2340C	
16	Conductivity	443	umhos/cm	10	700	700	NO	NO	2510B	WMA
17	Turbidity	NA	NTU	0.1	1				2130B	
18	Color	↓	color units	5	15	15			2120B	
26	Total Dissolved Solids	↓	mg/l	150	500	500			2540C	
STATE UNREGULATED										
9	Lead	NA	mg/l	0.002					3113B	
23	Copper	↓	mg/l	0.2					3111B	

COMMENTS: CHLORIDE & CONDUCTIVITY ONLY

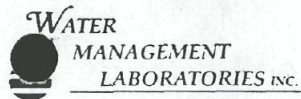
INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196 M	System Name: OLYMPIC CANAL TRACTS ADDN 1	
Lab/Sample No: 08954577	Date Collected: 4-5-02	DOH Source No: NEW
Multiple Source Nos: NA	Sample Type: B	Sample Purpose: C
Date Received: 4-6-02	Date Reported: 4-10-02	Supervisor: [Signature]
County: JEFFERSON	Date Digested: NA	Group: (A) B Other
Sample Location: WELLHEAD ← collected 24 hour into pumping per Bill Noel 5/22/02		
Send Results & Bill To: ARCADIA DRILLING		Remarks: AA004R
170 SE WALKER PK RD		
SHELTON WA 98584		

DOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method/Analyst
EPA REGULATED							Trigger?	MCL?	
4	Arsenic	<0.01	mg/l	0.01	0.05	0.05	NO	NO	3113B [Signature]
5	Barium	<0.1	mg/l	0.1	2	2			3113B [Signature]
6	Cadmium	<0.002	mg/l	0.002	0.005	0.005			3113B [Signature]
7	Chromium	<0.01	mg/l	0.01	0.1	0.1			3113B [Signature]
11	Mercury	<0.0005	mg/l	0.0005	0.002	0.002			3112B [Signature]
12	Selenium	<0.005	mg/l	0.005	0.05	0.05			3113B [Signature]
110	Beryllium	<0.002	mg/l	0.003	0.004	0.004			3113B [Signature]
111	Nickel	<0.04	mg/l	0.04	0.1	0.1			3111B [Signature]
112	Antimony	<0.002	mg/l	0.005	0.006	0.006			3113B [Signature]
113	Thallium	<0.001	mg/l	0.002	0.002	0.002			3113B [Signature]
116	Cyanide	<0.05	mg/l	0.05	0.2	0.2			4500-CNF [Signature]
19	Fluoride	<0.2	mg/l	0.2	2	4			4110B [Signature]
114	Nitrite - N	<0.2	mg/l	0.5	0.5	1			4110B [Signature]
20	Nitrate - N	<0.2	mg/l	0.5	5	10			4110B [Signature]
161	Total Nitrate/Nitrite	<0.4	mg/l	0.5	5	10			4110B [Signature]
EPA REGULATED (Secondary)									
8	Iron	<0.03	mg/l	0.1	0.3	0.3	NO	NO	3111B [Signature]
10	Manganese	<0.01	mg/l	0.01	0.05	0.05			3111B [Signature]
13	Silver	<0.01	mg/l	0.01	0.1	0.1			3111B [Signature]
21	Chloride	137	mg/l	20	250	250			4110B [Signature]
22	Sulfate	45	mg/l	10	250	250			4110B [Signature]
24	Zinc	<0.05	mg/l	0.2	5	5			3111B [Signature]
STATE REGULATED									
14	Sodium	73	mg/l	5					3111B [Signature]
15	Hardness	73	mg/l	10					2340C [Signature]
16	Conductivity	520	umhos/cm	10	700	700	NO	NO	2510B [Signature]
17	Turbidity	0.3	NTU	0.1	1				2130B [Signature]
18	Color	<5	color units	5	15	15		NO	2120B [Signature]
26	Total Dissolved Solids	NA	mg/l	150	500	500	-	-	2540C -
STATE UNREGULATED									
9	Lead	<0.002	mg/l	0.002					3113B [Signature]
23	Copper	<0.02	mg/l	0.2					3111B [Signature]

COMMENTS: FC28

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INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196M		System Name: OLYMPIC CANAL TRACTS ADDN 1							
Lab/Sample No: 08954576		Date Collected: 4-4-02				DOH Source No: NEW			
Multiple Source Nos: NA		Sample Type: B				Sample Purpose: B			
Date Received: 4-6-02		Date Reported: 4-8-02				Supervisor: WMA			
County: JEFFERSON		Date Digested: N/A		Group: A		B		Other	
Sample Location: WELLHEAD TEST 2 (12:00 AM MIDNIGHT)									
Send Results & Bill To: ARCADIA DRILLING						Remarks: A ADOHR			
170 SE WALKER PK RD						About 12 hrs into pump			
SHELTON WA 98584						per conversation w/ Bill Neal			
5/22/02 SC									
DOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method/Analyst
EPA REGULATED							Trigger?	MCL?	
4	Arsenic	N/A	mg/l	0.01	0.05	0.05			3113B
5	Barium		mg/l	0.1	2	2			3113B
6	Cadmium		mg/l	0.002	0.005	0.005			3113B
7	Chromium		mg/l	0.01	0.1	0.1			3113B
11	Mercury		mg/l	0.0005	0.002	0.002			3112B
12	Selenium		mg/l	0.005	0.05	0.05			3113B
110	Beryllium		mg/l	0.003	0.004	0.004			3113B
111	Nickel		mg/l	0.04	0.1	0.1			3111B
112	Antimony		mg/l	0.005	0.006	0.006			3113B
113	Thallium		mg/l	0.002	0.002	0.002			3113B
116	Cyanide		mg/l	0.05	0.2	0.2			4500-CNF
19	Fluoride		mg/l	0.2	2	4			4110B
114	Nitrite - N		mg/l	0.5	0.5	1			4110B
20	Nitrate - N		mg/l	0.5	5	10			4110B
161	Total Nitrate/Nitrite		mg/l	0.5	5	10			4110B
EPA REGULATED (Secondary)									
8	Iron	N/A	mg/l	0.1	0.3	0.3			3111B
10	Manganese		mg/l	0.01	0.05	0.05			3111B
13	Silver		mg/l	0.01	0.1	0.1			3111B
21	Chloride	138	mg/l	20	250	250	NO	NO	4110B
22	Sulfate	N/A	mg/l	10	250	250			4110B
24	Zinc		mg/l	0.2	5	5			3111B
STATE REGULATED									
14	Sodium	N/A	mg/l	5					3111B
15	Hardness		mg/l	10					2340C
16	Conductivity	535	umhos/cm	10	700	700	NO	NO	2510B
17	Turbidity	N/A	NTU	0.1	1				2130B
18	Color		color units	5	15	15			2120B
26	Total Dissolved Solids		mg/l	150	500	500			2540C
STATE UNREGULATED									
9	Lead	N/A	mg/l	0.002					3113B
23	Copper		mg/l	0.2					3111B

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INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196M System Name: OLYMPIC CANAL TRACTS ADDN 1

Lab/Sample No: 08954578 Date Collected: 4-4-02 DOH Source No: NEW

Multiple Source Nos: NA Sample Type: B Sample Purpose: B

Date Received: 4-6-02 Date Reported: 4-8-02 Supervisor: WMA

County: JEFFERSON Date Digested: N/A Group: (A) B Other

Sample Location: WELL HEAD TEST 1 (1:00 PM) PT per conversation w/ Bill Neel 5/2/02

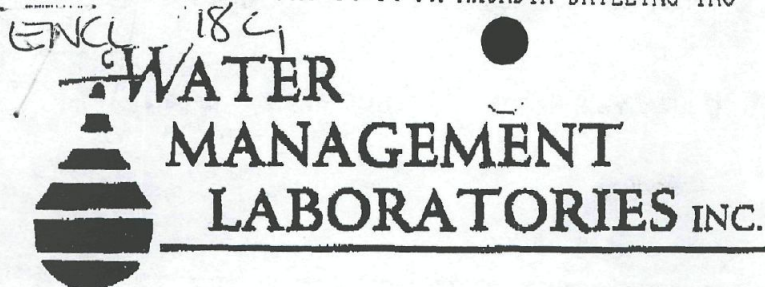
Send Results & Bill To: ARCADIA DRILLING 170 SE WALKER PK RD SHELTON WA 98584

Remarks: AA004R 5C

DOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS	Method/Analyst
EPA REGULATED							Trigger?	MCL?
4	Arsenic	N/A	mg/l	0.01	0.05	0.05		3113B
5	Barium		mg/l	0.1	2	2		3113B
6	Cadmium		mg/l	0.002	0.005	0.005		3113B
7	Chromium		mg/l	0.01	0.1	0.1		3113B
11	Mercury		mg/l	0.0005	0.002	0.002		3112B
12	Selenium		mg/l	0.005	0.05	0.05		3113B
110	Beryllium		mg/l	0.003	0.004	0.004		3113B
111	Nickel		mg/l	0.04	0.1	0.1		3111B
112	Antimony		mg/l	0.005	0.006	0.006		3113B
113	Thallium		mg/l	0.002	0.002	0.002		3113B
116	Cyanide		mg/l	0.05	0.2	0.2		4500-CNF
19	Fluoride		mg/l	0.2	2	4		4110B
114	Nitrite - N		mg/l	0.5	0.5	1		4110B
20	Nitrate - N		mg/l	0.5	5	10		4110B
161	Total Nitrate/Nitrite		mg/l	0.5	5	10		4110B
EPA REGULATED (Secondary)								
8	Iron	N/A	mg/l	0.1	0.3	0.3		3111B
10	Manganese		mg/l	0.01	0.05	0.05		3111B
13	Silver		mg/l	0.01	0.1	0.1		3111B
21	Chloride	136	mg/l	20	250	250	NO	4110B
22	Sulfate	N/A	mg/l	10	250	250		4110B
24	Zinc		mg/l	0.2	5	5		3111B
STATE REGULATED								
14	Sodium	N/A	mg/l	5				3111B
15	Hardness		mg/l	10				2340C
16	Conductivity	537	umhos/cm	10	700	700	NO	2510B
17	Turbidity	N/A	NTU	0.1	1			2130B
18	Color		color units	5	15	15		2120B
26	Total Dissolved Solids		mg/l	150	500	500		2540C
STATE UNREGULATED								
9	Lead	N/A	mg/l	0.002				3113B
23	Copper		mg/l	0.2				3111B

COMMENTS:

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VOLATILE ORGANIC CHEMICALS (VOC's) ANALYSIS REPORT EPA TEST METHOD - 524.2

System ID No.: 11196M		System Name: Olympic Canal Tracts Addition 1	
Lab/Sample No.: 08977959		Date Collected: 04/05/02	
Multiple Source Nos.: N/A		Sample Type: B	
Date Received: 04/06/02		Date Reported: 05/15/02	
Date Analyzed: 04/15/02		Supervisor: JWA	
County: Jefferson		Analyst: LHL	
Sample Location: Well Head		Group: A	
Send To: Arcadia Well Drilling 170 SE Walker Park Rd.; Shelton, WA 98584		Bill To: SAME	

Note: Failed Resampling After 30 Days Grace Period

DOH #	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS	
EPA REGULATED							Trigger?	MCL?
45	Vinyl Chloride	ND	ug/L	0.5	0.5	2	NO	NO
46	1,1 - Dichloroethylene	ND	ug/L	0.5	0.5	7	NO	NO
47	1,1,1 - Trichloroethane	ND	ug/L	0.5	0.5	200	NO	NO
48	Carbon Tetrachloride	ND	ug/L	0.5	0.5	5	NO	NO
49	Benzene	ND	ug/L	0.5	0.5	5	NO	NO
50	1,2 - Dichloroethane	ND	ug/L	0.5	0.5	5	NO	NO
51	Trichloroethylene	ND	ug/L	0.5	0.5	5	NO	NO
52	1,4 - Dichlorobenzene	ND	ug/L	0.5	0.5	75	NO	NO
56	Dichloromethane	ND	ug/L	0.5	0.5	5	NO	NO
57	trans-1,2 - Dichloroethylene	ND	ug/L	0.5	0.5	100	NO	NO
60	cis-1,2 - Dichloroethylene	ND	ug/L	0.5	0.5	70	NO	NO
63	1,2 - Dichloropropane	ND	ug/L	0.3	0.5	5	NO	NO
66	Toluene	0.7	ug/L	0.5	0.5	1000	Yes	NO
67	1,1,2 - Trichloroethane	ND	ug/L	0.5	0.5	5	NO	NO
68	Tetrachloroethylene	ND	ug/L	0.5	0.5	5	NO	NO
71	Chlorobenzene	ND	ug/L	0.5	0.5	100	NO	NO
73	Ethylbenzene	ND	ug/L	0.5	0.5	700	NO	NO
76	Styrene	1.4	ug/L	0.5	0.5	100	Yes	NO
84	1,2 - Dichlorobenzene	ND	ug/L	0.5	0.5	600	NO	NO
95	1,2,4 - Trichlorobenzene	ND	ug/L	0.5	0.5	70	NO	NO
160	Total Xylenes	ND	ug/L	0.5	0.5	10000	NO	NO
74	m/p Xylenes (MCL for Total)	ND	ug/L	0.5	0.5		NO	
75	o - Xylene (MCL for Total)	ND	ug/L	0.5	0.5		NO	
EPA UNREGULATED								
27	Chloroform	ND	ug/L	0.5	0.5		NO	
28	Bromodichloromethane	ND	ug/L	0.5	0.5		NO	
29	Chlorodibromomethane	ND	ug/L	0.5	0.5		NO	
30	Bromoform	ND	ug/L	0.5	0.5		NO	
53	Chloromethane	ND	ug/L	0.5	0.5		NO	
54	Bromomethane	ND	ug/L	0.5	0.5		NO	
55	Chloroethane	ND	ug/L	0.5	0.5		NO	

ENCL 18c2

e No. : 08977959

VOC ANALYSIS REPORT - METHOD 524.2 page 2

Water Management Laboratories, Inc.
1515 80th St. E.
Tacoma, WA 98404
(253) 531-3121

DOH #	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS	
EPA UNREGULATED (Continued)							Trigger?	MCL?
58	1,1 - Dichloroethane	ND	ug/L	0.5	0.5		NO	
59	2,2 - Dichloropropane	ND	ug/L	0.5	0.5		NO	
62	1,1 - Dichloropropene	ND	ug/L	0.5	0.5		NO	
64	Dibromomethane	ND	ug/L	0.5	0.5		NO	
70	1,3 - Dichloropropane	ND	ug/L	0.5	0.5		NO	
72	1,1,1,2 - Tetrachloroethane	ND	ug/L	0.5	0.5		NO	
78	Bromobenzene	ND	ug/L	0.5	0.5		NO	
79	1,2,3 - Trichloropropane	ND	ug/L	0.5	0.5		NO	
80	1,1,2,2 - Tetrachloroethane	ND	ug/L	0.5	0.5		NO	
81	o - Chlorotoluene	ND	ug/L	0.5	0.5		NO	
82	p - Chlorotoluene	ND	ug/L	0.5	0.5		NO	
83	m - Dichlorobenzene	ND	ug/L	0.5	0.5		NO	
154	1,3 - Dichloropropene	ND	ug/L	0.5	0.5		NO	
STATE UNREGULATED								
65	cis-1,3 - Dichloropropene	ND	ug/L	0.5	0.5		NO	
69	trans-1,3 - Dichloropropene	ND	ug/L	0.5	0.5		NO	
85	Fluorotrichloromethane	ND	ug/L	0.5	0.5		NO	
86	Bromochloromethane	ND	ug/L	0.5	0.5		NO	
87	Isopropylbenzene	ND	ug/L	0.5	0.5		NO	
88	n - Propylbenzene	ND	ug/L	0.5	0.5		NO	
89	1,3,5 - Trimethylbenzene	ND	ug/L	0.5	0.5		NO	
90	t - Butylbenzene	ND	ug/L	0.5	0.5		NO	
91	1,2,4 - Trimethylbenzene	ND	ug/L	0.5	0.5		NO	
92	s - Butylbenzene	ND	ug/L	0.5	0.5		NO	
93	p - Isopropyltoluene	ND	ug/L	0.5	0.5		NO	
94	n - Butylbenzene	ND	ug/L	0.5	0.5		NO	
96	Napthalene	ND	ug/L	0.5	0.5		NO	
97	Hexachlorobutadiene	ND	ug/L	0.5	0.5		NO	
98	1,2,3 - Trichlorobenzene	ND	ug/L	0.5	0.5		NO	
102	EDB (Confirm by 504.1)	ND	ug/L	0.5	0.5		NO	
103	DBCP (Confirm by 504.1)	ND	ug/L	0.5	0.5		NO	
182	Dichlorodifluoromethane	ND	ug/L	0.5	0.5		NO	
N/A	Nitrobenzene	ND	ug/L					
N/A	MTBE	ND	ug/L	0.5	0.5		NO	

NOTES:

SRL (State Reporting Level): Indicates the minimum reporting level required by the Washington Department of Health (DOH).

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level are required to take additional samples. Contact your regional DOH office for further information.

MCL (Maximum Contaminant Level): If the contaminant amount exceeds the MCL, immediately contact your regional DOH office.

NA (Not Analyzed): In the RESULTS column indicates this compound was not included in the current analysis.

ND (Not Detected): In the RESULTS column indicates this compound was analyzed and not detected at a level greater than or equal to the SRL.

< : indicates less than.

Comments : A maximum contaminant level of 80 ug/L total Trihalomethanes (Compounds 27-30) is allowed.

Method 524: VOC's

Washingtong State Public Health Laboratory

610 NE 150th Street, Shoreline WA. 98155-1

Phone (206) 361-2896

FAX (206) 361-2899

RADIONUCLIDE ANALYSES REPORT

System ID No.: 11196M		System Name: Olympic Canal Tracts Ad. 1	
Lab/Sample No: 02369209		Date Collected: 4/5/02 13:00	DOH Source No: New Source
Multiple Source Nos:		Sample Type: B	Sample Purpose: C
Date Received: 4/9/02	Date Reported: 05/08/02	Supervisor: [Signature]	
	Date Analyzed: 4/11/02	Analyst: SLB	
County: Jefferson		Group: A	
Sample Location: Well head			
Send Report To: Arcadia Drilling Inc. 170 SE Walker Park Rd. Shelton, WA 98584		Bill To: Arcadia Drilling Inc. 170 SE Walker Park Rd. Shelton, WA 98584	

DOH #	ANALYTES	LAB MDA	RESULTS	UNITS pCi/l	DATE ANALYZED	MCL	ANALYST/METHOD
39	Radium 226			pCi/l		3	
40	Radium 226 + 228			pCi/l		5	
41	Gross Alpha	3	ND	pCi/l	4/11/02	15*	SLB/EPA 900.0
42	Gross Beta	7	ND	pCi/l	4/11/02	50	SLB/EPA 900.0
43	Tritium			pCi/l		20000	
44	Strontium 90			pCi/l		8	
107	Cesium 134			pCi/l		**	
108	Iodine 131			pCi/l		**	
105	Uranium			pCi/l			
109	Radon			pCi/l			

NOTES:

MCL: Maximum Contaminant Level. If the contaminant amount exceeds the MCL, immediately contact your regional DOH office.

MDA: Minimum Detectable Amount.

NA (Not Analyzed) indicates this analyte was not included in the current analysis.

ND (Not Detected) indicates this analyte was analyzed and not detected at a level greater than or equal to the MDA.

* Excluding Uranium

** The MCL for beta particle and photon radioactivity from man-made radionuclides is the average annual concentration which shall not produce an annual dose equivalent to the total body or any internal organ greater than four milli-rem/yr.

Comments

This sample is for a new well - Well is not on line.

Charge Amount: \$73.00

S

SE HEAVY PEN

DO NOT WRITE IN SHADED AREAS

WATER
MANAGEMENT
LABORATORIES INC.1515 80th St. E.
Tacoma, WA 98404
(253) 531-3121SEE BACK
FOR INSTRUCTIONS

2, 3 ENCL 18e

INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196M	System Name: OLYMPIC CANAL TRACTS ADDN 1		
Lab / Sample No: 08954578	Date Collected: 4-4-02	DOH Source No: NEW	
Multiple Source Nos: NA	Sample Type: B	Sample Purpose: B	
Date Received: 4-6-02	Date Reported: 4-8-02	Supervisor: WMA	
County: JEFFERSON	Date Digested: N/A	Group: (A) B Other	
Sample Location: WELL HEAD TEST 1 (1:00 PM)			
Send Results & Bill To: ARCADIA DRILLING		Remarks: AA004R	
170 SE WALKER PIC RD SHELTON WA 98584			

IOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst
EPA REGULATED							Trigger?	MCL?	
4	Arsenic	N/A	mg/l	0.01	0.05	0.05			3113B
5	Barium		mg/l	0.1	2	2			3113B
6	Cadmium		mg/l	0.002	0.005	0.005			3113B
7	Chromium		mg/l	0.01	0.1	0.1			3113B
11	Mercury		mg/l	0.0005	0.002	0.002			3112B
12	Selenium		mg/l	0.005	0.05	0.05			3113B
110	Beryllium		mg/l	0.003	0.004	0.004			3113B
111	Nickel		mg/l	0.04	0.1	0.1			3111B
112	Antimony		mg/l	0.005	0.006	0.006			3113B
113	Thallium		mg/l	0.002	0.002	0.002			3113B
116	Cyanide		mg/l	0.05	0.2	0.2			4500-CNF
19	Fluoride		mg/l	0.2	2	4			4110B
114	Nitrite - N		mg/l	0.5	0.5	1			4110B
20	Nitrate - N		mg/l	0.5	5	10			4110B
61	Total Nitrate/Nitrite		mg/l	0.5	5	10			4110B
EPA REGULATED (Secondary)									
8	Iron	N/A	mg/l	0.1	0.3	0.3			3111B
10	Manganese		mg/l	0.01	0.05	0.05			3111B
13	Silver		mg/l	0.01	0.1	0.1			3111B
21	Chloride	136	mg/l	20	250	250	NO	NO	4110B JMB
22	Sulfate	N/A	mg/l	10	250	250			4110B
24	Zinc		mg/l	0.2	5	5			3111B
STATE REGULATED									
4	Sodium	N/A	mg/l	5					3111B
5	Hardness		mg/l	10					2340C
6	Conductivity	037	umhos/cm	10	700	700	NO	NO	2510B LHC
7	Turbidity	N/A	NTU	0.1	1				2130B
8	Color		color units	5	15	15			2120B
6	Total Dissolved Solids		mg/l	150	500	500			2540C
STATE UNREGULATED									
7	Lead	N/A	mg/l	0.002					3113B
3	Copper		mg/l	0.2					3111B

REMARKS: CHLORIDE AND CONDUCTIVITY ONLY

XX

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)

☐ Construction

☐ Decommission **ORIGINAL CONSTRUCTION Notice**
of Intent Number _____

Page 2 of 3
CURRENT Notice of Intent W157941

Unique Ecology Well ID Tag No. AGP368

Water Right Permit No. 62-29605

Property Owner Name Olympic Canal Tracts

Well Street Address 310713 Hwy 101

City Brinnon County Jefferson

Location NW 1/4 1/4 SE 1/4 Sec 21 Twn 25 N R 2 W EWM circle or one WWM

Lat/Long: Lat Deg Lat Min/Sec
(asr still REQUIRED) Long Deg Long Min/Sec

Tax Parcel No. 502214003

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)
☐ New Well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well _____ inches, drilled _____ ft.
Depth of completed well _____ ft.

CONSTRUCTION DETAILS

Casing ☐ Welded _____" Diam. from _____ ft. to _____ ft.
Installed: ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations ☐ Yes ☐ No

Type of perforator used _____

SIZE of perforations in. by in. and no. of perforations from ft. to ft.

Screens: ☐ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. Slot Size from ft. to ft.

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____

Materials placed from ft. to ft.

Surface Seal: ☐ Yes ☐ No To what depth? _____ ft.

Materials used in seal _____

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken at zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Artest _____ gal./min. with screen set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black basalt	357	398
Purple fractured basalt	398	409
Gray, green basalt with white quartz	409	421
Black basalt	421	438
Purple basalt	438	444
Fractured gray and green basalt	444	445
Gray & green basalt	445	452
Fractured gray & green basalt w/white quartz - wet	452	456
Black basalt	456	461
Fractured black basalt	461	465
Gray & green basalt	465	479
Grayish brown basalt	479	480
Gray basalt	480	485
Fractured black, green basalt with quartz	485	489
Black basalt	489	502
Fractured black, green basalt with quartz, water	502	509
Black basalt, water	509	512
Fractured black basalt	512	515
water	515	532
Black basalt, water	532	534
Fractured black basalt	534	
water		

CONTINUED ON NEXT PAGE

Start Date 4-1-02 Completed Date 4-2-02

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Rodenay Phythian Drilling Company Arcadia Drilling Inc.

Driller/Engineer/Trainee Signature _____ Address 170 SE Walker Park Road

Driller or Trainee License No. 2053 City, State, Zip Shelton WA 98584

If trainee, licensed driller's Signature and License no. _____ Contractor's ARCADDI098K1 Date 4-15-02

Registration No. _____ Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)



WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)

☒ Construction☐ Decommission ORIGINAL CONSTRUCTION Notice
of Intent Number _____PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New Well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven
☐ Deepened ☐ Cable ☒ Rotary ☐ JettedDIMENSIONS: Diameter of well 6 inches, drilled 562 ft.
Depth of completed well 562 ft.**CONSTRUCTION DETAILS**Casing ☒ Welded 6" Diam. from +2 ft. to 102 ft.
Installed: ☒ Liner installed 4.5" Diam. from 4 ft. to 562 ft.
☐ Threaded " Diam. from ft. to ft.Perforations: ☒ Yes ☐ No

Type of perforator used Drill

SIZE of ports 1 in. by 1 in. and no. of ports 320 from 4.02 ft. to 562 ft.

Screens: ☐ Yes ☒ No ☐ K-Pas Location _____

Manufacturer's Name _____

Type _____ Model No. _____
Diam. Slot Size from ft. to ft.
Diam. Slot Size from ft. to ft.Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from ft. to ft.

Surface Seal: ☒ Yes ☐ No To what depth? 3.0 ft.

Materials used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level 10 ft.

Static level Flowing ft. below top of well Date 4-2-02

Artesian pressure 22 lbs. per square inch Date 4-2-02

Artesian water is controlled by Weld on flange
(cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Arcadia Drill

Yield: gal./min. with ft. drawdown after hrs.

Yield: gal./min. with ft. drawdown after hrs.

Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off/water level measured from
well top to water level) SEE ATTACHED REPORT

Time Water Level Time Water Level Time Water Level

Date of test _____

Ballot test gal./min. with ft. drawdown after hrs.

Artest 50 gal./min. with stem set at 560 ft. for 1 hrs.

Artesian flow 3 g.p.m. Date 4-2-02

Temperature of water 50 Was a chemical analysis made? ☒ Yes ☐ NoWELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all
Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.☒ Driller ☐ Engineer ☐ Trainee Name (Print) Rogeray Pythlian Drilling Company Arcadia Drilling Inc

Driller/Engineer/Trainee Signature _____ Address 170 SE Walker Park Road

Driller or Trainee License No. 2053 City, State, Zip Shelton WA 98584

If trainee, licensed driller's _____ Contractor's ARCADDI098K1

Signature and License no. _____ Registration No. _____ Date _____

Page 1 of 3

CURRENT

Notice of Intent N. W157941

Unique Ecology Well ID Tag No. AGP368

Water Right Permit No. G2-29605

Property Owner Name Olympic Canal Tracts

Well Street Address 310713 Hwy 101

City Brinnon County: Jefferson

Location NW 1/4-1/4 SE 1/4 Sec. 21 Twn. 25N R. 2W EWM circle
or one WWMLat/Long: Lat Deg _____ Lat Min/Sec _____
(s, r still REQUIRED) Long Deg _____ Long Min/Sec _____

Tax Parcel No. 502214003

CONSTRUCTION OR DECOMMISSION PROCEDUREFormation: Describe by color, character, size of material and structure, and the
kind and nature of the material in each stratum penetrated, with at least one
entry for each change of information. Indicate all water encountered.
(USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Reddish brown silty clay	0	7
Gray silt binding fine	7	
to medium black sand		
and gravel		11
Brown fine to medium	11	
sand and gravel		14
Moist brown fine to	14	
medium sand some gravel		26
Brown silt to fine sand	26	31
Gray silt to fine sand	31	50
Black fractured basalt	50	
moist, silt to fine		
black sand		78
Black fractured basalt	78	
with silty gray clay		96
Brown weathered basalt	96	105
Gray sandstone	105	126
Black basalt	126	173
Blue basalt	173	182
Fractured blue basalt	182	184
Black basalt	184	253
Blue basalt	253	258
Black fractured basalt	258	262
Black dense basalt	262	284
Fractured black basalt	284	286
Black basalt	286	340
Purple basalt	340	357

CONTINUED ON NEXT PAGE

Start Date 4-1-02 Completed Date 4-2-02

City, State, Zip Shelton WA 98584

Contractor's ARCADDI098K1

Registration No. _____ Date _____

Ecology is an Equal Opportunity Employer. ECV 050-1-20 (Rev 4/01)

NCL 142

Arcadia Drilling, Inc.

Customer: Canal View Tracts
 310719 Hwy 101
 Brinnon, WA 98302
 Contact: Dave Anderson/ Dick Wasson

Phone: (253) 852-3687 Dave
 Phone: (206) 242-2072 Dick
 Fax:
 E-mail:
 Cell:

Project: Deep Well Drill and Test

Date of Test: 4/5 - 4/8 2002

Pump Test Data:

All Measurements are from top of casing

Recovery Data:

TIME	gallons per min. GPM	feet-10ths LEVEL
10 Sec.	40	3.3
20 Sec.	40	6.0
30 Sec.	40	8.3
40 Sec.	40	16.0
50 Sec.	40	20.0
60 Sec.	40	24.2
70 Sec.	40	28.6
80 Sec.	40	31.9
90 Sec.	40	36.0
100 Sec.	40	38.0
110 Sec.	40	40.8
2 Min.	40	42.9
2.5 Min.	40	50.9
3 Min.	40	56.3
3.5 Min.	40	61.5
4 Min.	40	66.7
4.5 Min.	40	69.7
5 Min.	40	72.9
6 Min.	40	78.5
7 Min.	40	82.5
8 Min.	40	86.2
9 Min.	40	89.0
10 Min.	40	91.2
11 Min.	40	93.3
12 Min.	40	94.8
13 Min.	40	95.7
14 Min.	40	97.1
15 Min.	40	98.1
20 Min.	40	101.1
25 Min.	40	102.9
30 Min.	40	104.3
35 Min.	40	106.4
40 Min.	40	108.2
45 Min.	40	107.6
50 Min.	40	108.4
60 Min.	40	109.4
70 Min.	40	110.4
80 Min.	40	111.2
90 Min.	40	111.9
100 Min.	40	112.6
130 Min.	40	114.3
160 Min.	40	116.5
190 Min.	40	118.1
220 Min.	40	119.0
250 Min.	40	120.3
280 Min.	40	121.4
5 Hr.	40	122.6
6 Hr.	40	124.0

TIME	gallons per min. GPM	feet-10ths LEVEL
7 Hr.	40	125.7
8 Hr.	40	127.5
9 Hr.	40	128.5
10 Hr.	40	129.6
11 Hr.	40	131.0
12 Hr.	40	132.2
13 Hr.	40	133.5
14 Hr.	40	135.6
15 Hr.	40	136.4
16 Hr.	40	137.8
17 Hr.	40	138.5
18 Hr.	40	139.6
19 Hr.	40	140.3
20 Hr.	40	140.9
21 Hr.	40	141.9
22 Hr.	40	143.0
23 Hr.	40	143.9
24 Hr.	40	144.9
25 Hr.	40	147.8
26 Hr.	40	149.9
27 Hr.	40	151.9
28 Hr.	40	152.6
29 Hr.	40	153.4
30 Hr.	40	154.2
31 Hr.	40	155.4
32 Hr.	40	156.0
33 Hr.	40	156.6
34 Hr.	40	157.0
35 Hr.	40	157.5
36 Hr.	40	158.0
37 Hr.	40	158.5
38 Hr.	40	159.4
39 Hr.	40	160.1
40 Hr.	40	160.8
41 Hr.	Pump Off at 40 Hrs.	
42 Hr.		
43 Hr.		
44 Hr.		
45 Hr.		
46 Hr.		
47 Hr.		
48 Hr.		
49 Hr.		
50 Hr.		
51 Hr.		
52 Hr.		
53 Hr.		
54 Hr.		

TIME	feet-10ths LEVEL
10 Sec.	148.0
20 Sec.	
30 Sec.	137.0
40 Sec.	
50 Sec.	125.0
60 Sec.	121.0
2 Min.	113.0
3 Min.	105.0
4 Min.	99.5
5 Min.	92.9
6 Min.	88.1
7 Min.	83.7
8 Min.	81.0
9 Min.	79.3
10 Min.	77.4
11 Min.	76.1
12 Min.	76.0
13 Min.	74.0
14 Min.	73.2
15 Min.	72.6
20 Min.	70.5
25 Min.	69.0
30 Min.	67.8
1 Hr.	62.9
2 Hr.	59.1
3 Hr.	59.5
4 Hr.	51.0
5 Hr.	49.4
6 Hr.	47.8
7 Hr.	46.4
8 Hr.	45.2
9 Hr.	43.9
10 Hr.	43.2
11 Hr.	42.9
12 Hr.	41.8
15 Hr.	
16 Hr.	
17 Hr.	
18 Hr.	
19 Hr.	
20 Hr.	
21 Hr.	
22 Hr.	
23 Hr.	
24 Hr.	28.6
36 Hr.	
48 Hr.	
72 Hr.	12.5

EWL: flow 5.5 gpm
 Artesian psi 22 PSI
 Date: 4/15/2002 (tax day)

Notes: Water was clear and turbid free throughout the test. Samples for Chloride and Conductivity were taken at 60 min., 12 Hrs. and 40 Hrs. IQC, VDC, Radionuclides, and Coliform Bact. was taken at 24 hours

ENCL 189

1 2 WATER BACTERIOLOGICAL ANALYSIS

3

SAMPLE COLLECTION: READ INSTRUCTIONS ON BACK OF GOLDENROD COPY
If instructions are not followed, sample will be rejected.

DATE COLLECTED MONTH DAY YEAR 4 / 5 / 02		TIME COLLECTED 1 : 00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	COUNTY NAME Jefferson
TYPE OF SYSTEM <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> INDIVIDUAL (serves only 1 residence)	IF PUBLIC SYSTEM, COMPLETE: I.D. No. 11196M		CIRCLE GROUP A B
NAME OF SYSTEM Olympic Canal Tracks Add. 1			
SPECIFIC LOCATION WHERE SAMPLE COLLECTED (ie. kitchen tap, school, fire station, fountain) NEW Well Head		TELEPHONE NO. DAY (360) 426-3395	
SAMPLE COLLECTED BY: (Name) Arcadia Drilling.		SYSTEM OWNER / MGR.: (Name) ARCADIA DRILLING, INC	
SOURCE TYPE <input type="checkbox"/> GROUND WATER UNDER SURFACE INFLUENCE <input type="checkbox"/> SURFACE <input checked="" type="checkbox"/> WELL or WELL FIELD <input type="checkbox"/> SPRING <input type="checkbox"/> PURCHASED or INTERTIE <input type="checkbox"/> COMBINATION or OTHER			
SEND REPORT TO: (Print Full Name, Address and Zip Code) ARCADIA DRILLING, INC SE 170 WALKER PARK ROAD SHELTON, WASHINGTON 98584			

TYPE OF SAMPLE (check only one in this column)

ROUTINE
DRINKING WATER
check treatment
☐ Chlorinated (Residual: _____ Total _____ Free)
☐ Filtered
☐ Untreated or Other _____


REPEAT SAMPLE

Previous coliform presence

Lab # _____

Previous coliform presence

Date _____



RAW SOURCE WATER

Source # S

NEW CONSTRUCTION or REPAIRS

Total Coliform
Fecal Coliform

OTHER (Specify) _____

REMARKS

New Well Not ON LINE !!

LABORATORY RESULTS (FOR LAB USE ONLY)

METHOD USED				
MP	MPN	PA	MMO	GPRG
TOTAL COLIFORM _____ / 100 ml			E. COLI _____ / 100 ml	
FECAL COLIFORM _____ / 100 ml			HETEROTROPHIC _____ / per ml	

ANOTHER SAMPLE REQUIRED

SAMPLE NOT TESTED BECAUSE:

- ☐
- Sample too old
-
- ☐
- Wrong container
-
- ☐
- Incomplete form
-
- ☐
- _____

TEST UNSUITABLE BECAUSE:

- ☐
- Contluent growth
-
- ☐
- TNTC
-
- ☐
- Turbid culture
-
- ☐
- Excess debris

DRINKING WATER SAMPLE RESULTS

<input type="checkbox"/> UNSATISFACTORY, Coliforms present		<input checked="" type="checkbox"/> SATISFACTORY, Coliforms absent	
REPEAT SAMPLES REQUIRED	<input type="checkbox"/> E. Coli present <input type="checkbox"/> Fecal present	<input type="checkbox"/> E. Coli absent <input type="checkbox"/> Fecal absent	

SEE REVERSE SIDE OF GREEN COPY FOR EXPLANATION OF RESULTS

LAB NO. 089 61945	DATE, TIME RECEIVED 4-6-02 8 AM	RECEIVED BY OJO
DATE REPORTED 4-7-02	ROUTE	ACCT. # AA004R

S

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DO NOT WRITE IN SHADED AREASWATER
MANAGEMENT
LABORATORIES INC.

INORGANIC CHEMICALS (IOCS) REPORT

Item ID No: 11196M	System Name: OLYMPIC CANAL TRACTS ADDN 1		
Sample No: 08954577	Date Collected: 4-5-02	DOH Source No: NEW	
Multiple Source Nos: NA	Sample Type: B	Sample Purpose: C	
Date Received: 4-6-02	Date Reported: 4-10-02	Supervisor: [Signature]	
County: JEFFERSON	Date Digested: NA	Group: (A) B Other	
Sample Location: WELLHEAD			
Bill To: ARCADIA DRILLING		Remarks: AA004R	
170 SE WALKER PK RD SHELTON WA 98584			

#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method/Analyst
EPA REGULATED							Trigger?	MCL?	
1	Arsenic	<0.01	mg/l	0.01	0.05	0.05	NO	NO	3113B [Signature]
2	Barium	<0.1	mg/l	0.1	2	2			3113B [Signature]
3	Cadmium	<0.002	mg/l	0.002	0.005	0.005			3113B [Signature]
4	Chromium	<0.01	mg/l	0.01	0.1	0.1			3113B [Signature]
5	Mercury	<0.0005	mg/l	0.0005	0.002	0.002			3112B [Signature]
6	Selenium	<0.005	mg/l	0.005	0.05	0.05			3113B [Signature]
7	Beryllium	<0.002	mg/l	0.003	0.004	0.004			3113B [Signature]
8	Nickel	<0.04	mg/l	0.04	0.1	0.1			3111B [Signature]
9	Antimony	<0.002	mg/l	0.005	0.006	0.006			3113B [Signature]
10	Thallium	<0.001	mg/l	0.002	0.002	0.002			3113B [Signature]
11	Cyanide	<0.05	mg/l	0.05	0.2	0.2			4500-CNF [Signature]
12	Fluoride	<0.2	mg/l	0.2	2	4			4110B LHL
13	Nitrite - N	<0.2	mg/l	0.5	0.5	1			4110B LHL
14	Nitrate - N	<0.2	mg/l	0.5	5	10			4110B LHL
15	Total Nitrate/Nitrite	<0.4	mg/l	0.5	5	10			4110B LHL
EPA REGULATED (Secondary)									
16	Iron	<0.03	mg/l	0.1	0.3	0.3	NO	NO	3111B [Signature]
17	Manganese	<0.01	mg/l	0.01	0.05	0.05			3111B [Signature]
18	Silver	<0.01	mg/l	0.01	0.1	0.1			3111B [Signature]
19	Chloride	137	mg/l	20	250	250			4110B [Signature]
20	Sulfate	45	mg/l	10	250	250			4110B [Signature]
21	Zinc	<0.05	mg/l	0.2	5	5			3111B [Signature]
STATE REGULATED									
22	Sodium	73	mg/l	5					3111B [Signature]
23	Hardness	73	mg/l	10					2340C [Signature]
24	Conductivity	520	umhos/cm	10	700	700	NO	NO	2510B LHL
25	Turbidity	0.3	NTU	0.1	1				2130B LHL
26	Color	<5	color units	5	15	15		NO	2120B LHL
27	Total Dissolved Solids	NA	mg/l	150	500	500	-	-	2540C -
STATE UNREGULATED									
28	Lead	<0.002	mg/l	0.002					3113B [Signature]
29	Copper	<0.02	mg/l	0.2					3111B [Signature]

REMARKS: FC28

INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196 M System Name: OLYMPIC CANAL TRACTS ADDN 1
Lab/Sample No: 089 54608 Date Collected: 4-6-02 DOH Source No: WA
Multiple Source Nos: NA Sample Type: B Sample Purpose: B
Date Received: 4-9-02 Date Reported: 4-11-02 Supervisor: GPS
County: JEFFERSON Date Digested: NA Group: (A) B Other
Sample Location: NEW WELL (4:30 PM)
Send Results & Bill To: ARCADIA DRILLING
170 SE WALKER PARK RD
SHELTON WA 98584
Remarks: AA004R

OH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst	
EPA REGULATED							Trigger?	MCL?		
4	Arsenic	NA	mg/l	0.01	0.05	0.05			3113B	
5	Barium		mg/l	0.1	2	2			3113B	
6	Cadmium		mg/l	0.002	0.005	0.005			3113B	
7	Chromium		mg/l	0.01	0.1	0.1			3113B	
11	Mercury		mg/l	0.0005	0.002	0.002			3112B	
12	Selenium		mg/l	0.005	0.05	0.05			3113B	
10	Beryllium		mg/l	0.003	0.004	0.004			3113B	
11	Nickel		mg/l	0.04	0.1	0.1			3111B	
12	Antimony		mg/l	0.005	0.006	0.006			3113B	
13	Thallium		mg/l	0.002	0.002	0.002			3113B	
16	Cyanide		mg/l	0.05	0.2	0.2			4500-CNF	
9	Fluoride		mg/l	0.2	2	4			4110B	
14	Nitrite - N		mg/l	0.5	0.5	1			4110B	
10	Nitrate - N		mg/l	0.5	5	10			4110B	
51	Total Nitrate/Nitrite		mg/l	0.5	5	10			4110B	
EPA REGULATED (Secondary)										
3	Iron	NA	mg/l	0.1	0.3	0.3			3111B	
0	Manganese		mg/l	0.01	0.05	0.05			3111B	
3	Silver		mg/l	0.01	0.1	0.1			3111B	
1	Chloride	132	mg/l	20	250	250	NO	NO	4110B	GPS
2	Sulfate	NA	mg/l	10	250	250			4110B	
4	Zinc		mg/l	0.2	5	5			3111B	
STATE REGULATED										
4	Sodium	NA	mg/l	5					3111B	
5	Hardness		mg/l	10					2340C	
6	Conductivity	443	umhos/cm	10	700	700	NO	NO	2510B	WMA
7	Turbidity	NA	NTU	0.1	1				2130B	
3	Color		color units	5	15	15			2120B	
5	Total Dissolved Solids		mg/l	150	500	500			2540C	
STATE UNREGULATED										
	Lead	NA	mg/l	0.002					3113B	
3	Copper		mg/l	0.2					3111B	

REMARKS: CHLORIDE + CONDUCTIVITY ONLY



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1.2.3

ENCL 1823

WATER
MANAGEMENT
LABORATORIES INC.1515 80th St. E.
Tacoma, WA 98404
(253) 531-3121SEE BACK
FOR INSTRUCTIONS

INORGANIC CHEMICALS (IOCS) REPORT

System ID No: 11196M	System Name: OLYMPIC CANAL TRACTS ADDN 1		
Lab / Sample No: 08954576	Date Collected: 4-4-02	DOH Source No: NEW	
Multiple Source Nos: NA	Sample Type: B	Sample Purpose: B	
Date Received: 4-6-02	Date Reported: 4-8-02	Supervisor: WMA	
County: JEFFERSON	Date Digested: N/A	Group: (A) B Other	
Sample Location: WELLHEAD TEST 2 (12:00 AM MIDNIGHT)			
Send Results & Bill To: ARCADIA DRILLING		Remarks: A ADOHR	
170 SE WALKER PK RD SHELTON WA 98584			

DOH#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method/Analyst
EPA REGULATED							Trigger?	MCL?	
4	Arsenic	N/A	mg/l	0.01	0.05	0.05			3113B
5	Barium		mg/l	0.1	2	2			3113B
6	Cadmium		mg/l	0.002	0.005	0.005			3113B
7	Chromium		mg/l	0.01	0.1	0.1			3113B
11	Mercury		mg/l	0.0005	0.002	0.002			3112B
12	Selenium		mg/l	0.005	0.05	0.05			3113B
110	Beryllium		mg/l	0.003	0.004	0.004			3113B
111	Nickel		mg/l	0.04	0.1	0.1			3111B
112	Antimony		mg/l	0.005	0.006	0.006			3113B
113	Thallium		mg/l	0.002	0.002	0.002			3113B
116	Cyanide		mg/l	0.05	0.2	0.2			4500-CNF
19	Fluoride		mg/l	0.2	2	4			4110B
114	Nitrite - N		mg/l	0.5	0.5	1			4110B
20	Nitrate - N		mg/l	0.5	5	10			4110B
161	Total Nitrate/Nitrite	✓	mg/l	0.5	5	10			4110B
EPA REGULATED (Secondary)									
8	Iron	N/A	mg/l	0.1	0.3	0.3			3111B
10	Manganese		mg/l	0.01	0.05	0.05			3111B
13	Silver	↓	mg/l	0.01	0.1	0.1			3111B
21	Chloride	138	mg/l	20	250	250	NO	NO	4110B
22	Sulfate	N/A	mg/l	10	250	250			4110B
24	Zinc	↓	mg/l	0.2	5	5			3111B
STATE REGULATED									
14	Sodium	N/A	mg/l	5					3111B
15	Hardness	↓	mg/l	10					2340C
16	Conductivity	535	umhos/cm	10	700	700	NU	NU	2510B
17	Turbidity	N/A	NTU	0.1	1				2130B
18	Color	↓	color units	5	15	15			2120B
26	Total Dissolved Solids	↓	mg/l	150	500	500			2540C
STATE UNREGULATED									
9	Lead	N/A	mg/l	0.002					3113B
23	Copper	↓	mg/l	0.2					3111B

COMMENTS: CHLORIDE AND CONDUCTIVITY ONLY

**

INORGANIC CHEMICALS (IOCS) REPORT

em ID No: 11196M System Name: OLYMPIC CANAL TRACTS ADDN 1
/ Sample No: 08954576 Date Collected: 4-4-02 DOH Source No: NEW
Multiple Source Nos: NA Sample Type: B Sample Purpose: B
Received: 4-6-02 Date Reported: 4-8-02 Supervisor: WMA
County: JEFFERSON Date Digested: N/A Group: A B Other
Sample Location: WELLHEAD TEST 2 (12:00 AM MIDNIGHT)
Send Results & Bill To: ARCADIA DRILLING
70 SE WALKER PK RD
SHELTON WA 98584
Remarks: A ADOHR

#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst	
EPA REGULATED							Trigger?	MCL?		
	Arsenic	N/A	mg/l	0.01	0.05	0.05			3113B	
	Barium		mg/l	0.1	2	2			3113B	
	Cadmium		mg/l	0.002	0.005	0.005			3113B	
	Chromium		mg/l	0.01	0.1	0.1			3113B	
	Mercury		mg/l	0.0005	0.002	0.002			3112B	
	Selenium		mg/l	0.005	0.05	0.05			3113B	
	Beryllium		mg/l	0.003	0.004	0.004			3113B	
	Nickel		mg/l	0.04	0.1	0.1			3111B	
	Antimony		mg/l	0.005	0.006	0.006			3113B	
	Thallium		mg/l	0.002	0.002	0.002			3113B	
	Cyanide		mg/l	0.05	0.2	0.2			4500-CNF	
	Fluoride		mg/l	0.2	2	4			4110B	
	Nitrite - N		mg/l	0.5	0.5	1			4110B	
	Nitrate - N		mg/l	0.5	5	10			4110B	
	Total Nitrate/Nitrite		mg/l	0.5	5	10			4110B	
EPA REGULATED (Secondary)										
	Iron	N/A	mg/l	0.1	0.3	0.3			3111B	
	Manganese		mg/l	0.01	0.05	0.05			3111B	
	Silver		mg/l	0.01	0.1	0.1			3111B	
	Chloride	138	mg/l	20	250	250	NO	NO	4110B	WMA
	Sulfate	N/A	mg/l	10	250	250			4110B	
	Zinc		mg/l	0.2	5	5			3111B	
STATE REGULATED										
	Sodium	N/A	mg/l	5					3111B	
	Hardness		mg/l	10					2340C	
	Conductivity	535	umhos/cm	10	700	700	NO	NO	2510B	LHL
	Turbidity	N/A	NTU	0.1	1				2130B	
	Color		color units	5	15	15			2120B	
	Total Dissolved Solids		mg/l	150	500	500			2540C	
STATE UNREGULATED										
	Lead	N/A	mg/l	0.002					3113B	
	Copper		mg/l	0.2					3111B	

REMARKS: CHLORIDE AND CONDUCTIVITY ONLY

INORGANIC CHEMICALS (IOCS) REPORT

m ID No: 11196 M System Name: OLYMPIC CANAL TRACTS ADDN 1
Sample No: 08954577 Date Collected: 4-5-02 DOH Source No: NEW
Sample Source Nos: NA Sample Type: B Sample Purpose: C
Received: 4-6-02 Date Reported: 4-10-02 Supervisor: MP
City: JEFFERSON Date Digested: NA Group: A B Other
Sample Location: WELLHEAD

Results & Bill To: ARCADIA DRILLING
70 SE WALKER PK RD
HELTON WA 98584
Remarks: AA004R

#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst
EPA REGULATED							Trigger?	MCL?	
	Arsenic	<0.01	mg/l	0.01	0.05	0.05	NO	NO	3113B MP
	Barium	<0.1	mg/l	0.1	2	2			3113B MP
	Cadmium	<0.002	mg/l	0.002	0.005	0.005			3113B MP
	Chromium	<0.01	mg/l	0.01	0.1	0.1			3113B MP
	Mercury	<0.0005	mg/l	0.0005	0.002	0.002			3112B MP
	Selenium	<0.005	mg/l	0.005	0.05	0.05			3113B MP
	Beryllium	<0.002	mg/l	0.003	0.004	0.004			3113B MP
	Nickel	<0.04	mg/l	0.04	0.1	0.1			3111B MP
	Antimony	<0.002	mg/l	0.005	0.006	0.006			3113B MP
	Thallium	<0.001	mg/l	0.002	0.002	0.002			3113B MP
	Cyanide	<0.05	mg/l	0.05	0.2	0.2			4500-CNF MP
	Fluoride	<0.2	mg/l	0.2	2	4			4110B LHL
	Nitrite - N	<0.2	mg/l	0.5	0.5	1			4110B LHL
	Nitrate - N	<0.2	mg/l	0.5	5	10			4110B LHL
	Total Nitrate/Nitrite	<0.4	mg/l	0.5	5	10			4110B LHL
EPA REGULATED (Secondary)									
	Iron	<0.03	mg/l	0.1	0.3	0.3	NO	NO	3111B MP
	Manganese	<0.01	mg/l	0.01	0.05	0.05			3111B MP
	Silver	<0.01	mg/l	0.01	0.1	0.1			3111B MP
	Chloride	137	mg/l	20	250	250			4110B MP
	Sulfate	45	mg/l	10	250	250			4110B MP
	Zinc	<0.05	mg/l	0.2	5	5			3111B MP
STATE REGULATED									
	Sodium	73	mg/l	5					3111B MP
	Hardness	73	mg/l	10					2340C MP
	Conductivity	520	umhos/cm	10	700	700	NO	NO	2510B LHL
	Turbidity	0.3	NTU	0.1	1				2130B LHL
	Color	<5	color units	5	15	15	✓	NO	2120B LHL
	Total Dissolved Solids	NA	mg/l	150	500	500	-	-	2540C -
STATE UNREGULATED									
	Lead	<0.002	mg/l	0.002					3113B MP
	Copper	<0.02	mg/l	0.2					3111B MP

REMARKS: FC28

INORGANIC CHEMICALS (IOCS) REPORT

Form ID No: 11196 M	System Name: OLYMPIC CANAL TRACTS ADDN 1	
Sample No: 08954608	Date Collected: 4-6-02	DOH Source No: WA
Sample Source Nos: NA	Sample Type: B	Sample Purpose: B
Received: 4-9-02	Date Reported: 4-11-02	Supervisor: GPS
City: JEFFERSON	Date Digested: NA	Group: (A) B Other
Sample Location: NEW WELL (4:30 PM)		
Results & Bill To: ARCADIA DRILLING	Remarks: A A 004 R	
170 SE WALKER PARK RD		
SHELTON WA 98584		

#	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method / Analyst	
EPA REGULATED							Trigger?	MCL?		
	Arsenic	NA	mg/l	0.01	0.05	0.05			3113B	
	Barium	↓	mg/l	0.1	2	2			3113B	
	Cadmium	↓	mg/l	0.002	0.005	0.005			3113B	
	Chromium	↓	mg/l	0.01	0.1	0.1			3113B	
	Mercury	↓	mg/l	0.0005	0.002	0.002			3112B	
	Selenium	↓	mg/l	0.005	0.05	0.05			3113B	
	Beryllium	↓	mg/l	0.003	0.004	0.004			3113B	
	Nickel	↓	mg/l	0.04	0.1	0.1			3111B	
	Antimony	↓	mg/l	0.005	0.006	0.006			3113B	
	Thallium	↓	mg/l	0.002	0.002	0.002			3113B	
	Cyanide	↓	mg/l	0.05	0.2	0.2			4500-CNF	
	Fluoride	↓	mg/l	0.2	2	4			4110B	
	Nitrite - N	↓	mg/l	0.5	0.5	1			4110B	
	Nitrate - N	↓	mg/l	0.5	5	10			4110B	
	Total Nitrate/Nitrite	↓	mg/l	0.5	5	10			4110B	
EPA REGULATED (Secondary)										
	Iron	NA	mg/l	0.1	0.3	0.3			3111B	
	Manganese	↓	mg/l	0.01	0.05	0.05			3111B	
	Silver	↓	mg/l	0.01	0.1	0.1			3111B	
	Chloride	132	mg/l	20	250	250	NO	NO	4110B	GPS
	Sulfate	NA	mg/l	10	250	250			4110B	
	Zinc	↓	mg/l	0.2	5	5			3111B	
STATE REGULATED										
	Sodium	NA	mg/l	5					3111B	
	Hardness	↓	mg/l	10					2340C	
	Conductivity	44.3	umhos/cm	10	700	700	NO	NO	2510B	WMA
	Turbidity	NA	NTU	0.1	1				2130B	
	Color	↓	color units	5	15	15			2120B	
	Total Dissolved Solids	↓	mg/l	150	500	500			2540C	
STATE UNREGULATED										
	Lead	NA	mg/l	0.002					3113B	
	Copper	↓	mg/l	0.2					3111B	

REMARKS: CHLORIDE & CONDUCTIVITY ONLY

1 2 WATER BACTERIOLOGICAL ANALYSIS

3

SAMPLE COLLECTION. READ INSTRUCTIONS ON BACK OF GOLDENROD COPY
If instructions are not followed, sample will be rejected.

DATE COLLECTED MONTH / DAY / YEAR 4 / 5 / 02			TIME COLLECTED 1 : 00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		COUNTY NAME Jefferson
TYPE OF SYSTEM <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> INDIVIDUAL (serves only 1 residence)		IF PUBLIC SYSTEM, COMPLETE: I.D. No. 11196M			CIRCLE GROUP A B

NAME OF SYSTEM

Olympic Canal Tracks Add. 1

SPECIFIC LOCATION WHERE SAMPLE COLLECTED
(ie, kitchen tap, school, fire station, fountain)

NEW
WELL Head

TELEPHONE NO.

DAY (360) 426-3395

EVENING ()

SAMPLE COLLECTED BY: (Name)

Arcadia Drilling.

SYSTEM OWNER / MGR.: (Name)

ARCADIA DRILLING, INC

SOURCE TYPE ☐ GROUND WATER UNDER SURFACE INFLUENCE

☐ SURFACE ☒ WELL or WELL FIELD ☐ SPRING ☐ PURCHASED or INTERIE ☐ COMBINATION or OTHER

SEND REPORT TO: (Print Full Name, Address and Zip Code)

ARCADIA DRILLING, INC

SE 170 WALKER PARK ROAD

SHELTON,

WASHINGTON 98584

TYPE OF SAMPLE (check only one in this column)



ROUTINE
DRINKING WATER
check treatment

☐ Chlorinated (Residual: _____ Total _____ Free)
☐ Filtered
☐ Untreated or Other _____

☐ REPEAT SAMPLE

Previous coliform presence
Previous coliform presence

Lab # _____
Date _____

☒ RAW SOURCE WATER

Source # S

NEW CONSTRUCTION or REPAIRS

☐ Total Coliform
☐ Fecal Coliform

☐ OTHER (Specify) _____

REMARKS

New well Not on Line !!

LABORATORY RESULTS (FOR LAB USE ONLY)

METHOD USED

MF	MPN	PA	MMO	CPRG
TOTAL COLIFORM _____ / 100 ml			E. COLI _____ / 100 ml	
FECAL COLIFORM _____ / 100 ml			HETEROTROPHIC _____ / per ml	

ANOTHER SAMPLE REQUIRED

SAMPLE NOT TESTED BECAUSE:

☐ Sample too old
☐ Wrong container
☐ Incomplete form
☐ _____

TEST UNSUITABLE BECAUSE:

☐ Confluent growth
☐ TNTC
☐ Turbid culture
☐ Excess debris

DRINKING WATER SAMPLE RESULTS

<input type="checkbox"/> UNSATISFACTORY, Coliforms present		<input checked="" type="checkbox"/> SATISFACTORY, Coliforms absent	
REPEAT SAMPLES REQUIRED	<input type="checkbox"/> E. Coli present <input type="checkbox"/> Fecal present	<input type="checkbox"/> E. Coli absent <input type="checkbox"/> Fecal absent	

SEE REVERSE SIDE OF GREEN COPY FOR EXPLANATION OF RESULTS

LAB NO. 089 61945	DATE, TIME RECEIVED 4-6-02 8AM	RECEIVED BY UZO
DATE REPORTED 4-7-02	ROUTE	ACCT. # AA004R

WATER BACTERIOLOGICAL ANALYSIS

SAMPLE COLLECTION INSTRUCTIONS ON BACK OF GOLDENPCD COPY
If instructions are not followed, sample will be rejected.

DATE COLLECTED MONTH / DAY / YEAR 4 / 5 / 02			TIME COLLECTED 1 : 00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		COUNTY NAME Jefferson
TYPE OF SYSTEM <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> INDIVIDUAL (serves only 1 residence)		IF PUBLIC SYSTEM, COMPLETE: I.D. No. 11196M CIRCLE GROUP A			
NAME OF SYSTEM Olympic Canal Tracts Add. 1					
SPECIFIC LOCATION WHERE SAMPLE COLLECTED (ie. kitchen tap @ school, fire station, fountain) NEW Well Head			TELEPHONE NO. DAY (360) 426-3395 EVENING ()		
SAMPLE COLLECTED BY: (Name) Arcadia Drilling.			SYSTEM OWNER / MGR.: (Name) ARCADIA DRILLING, INC		
SOURCE TYPE <input type="checkbox"/> GROUND WATER UNDER SURFACE INFLUENCE <input type="checkbox"/> SURFACE <input checked="" type="checkbox"/> WELL or <input type="checkbox"/> SPRING <input type="checkbox"/> PURCHASED or <input type="checkbox"/> COMBINATION <input type="checkbox"/> WELL FIELD <input type="checkbox"/> INTERTIE <input type="checkbox"/> OTHER					
SEND REPORT TO: (Print Full Name, Address and Zip Code) ARCADIA DRILLING, INC SE 170 WALKER PARK ROAD SHELTON, WASHINGTON 98584					
TYPE OF SAMPLE (check only one in this column)					
<input checked="" type="checkbox"/> ROUTINE DRINKING WATER check treatment		<input type="checkbox"/> Chlorinated (Residual: ____ Total ____ Free) <input type="checkbox"/> Filtered <input type="checkbox"/> Untreated or Other _____			
<input type="checkbox"/> REPEAT SAMPLE Previous coliform presence Lab # _____ Previous coliform presence Date _____					
<input checked="" type="checkbox"/> RAW SOURCE WATER <input checked="" type="checkbox"/> NEW CONSTRUCTION or REPAIRS		Source # S <input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> Total Coliform <input type="checkbox"/> Fecal Coliform	
<input type="checkbox"/> OTHER (Specify) _____					
REMARKS New well Not on line !!					
LABORATORY RESULTS (FOR LAB USE ONLY)					
METHOD USED					
MF	MPN	PA	MMO	CPRG	
TOTAL COLIFORM _____ / 100 ml			E. COLI _____ / 100 ml		
FECAL COLIFORM _____ / 100 ml			HETEROTROPHIC _____ / per ml		
ANOTHER SAMPLE REQUIRED					
SAMPLE NOT TESTED BECAUSE: <input type="checkbox"/> Sample too old <input type="checkbox"/> Wrong container <input type="checkbox"/> Incomplete form <input type="checkbox"/> _____			TEST UNSUITABLE BECAUSE: <input type="checkbox"/> Confluent growth <input type="checkbox"/> TNTC <input type="checkbox"/> Turbid culture <input type="checkbox"/> Excess debris		
DRINKING WATER SAMPLE RESULTS					
<input type="checkbox"/> UNSATISFACTORY, Coliforms present			<input checked="" type="checkbox"/> SATISFACTORY, Coliforms absent		
REPEAT SAMPLES REQUIRED	<input type="checkbox"/> E. Coli present <input type="checkbox"/> Fecal present	<input type="checkbox"/> E. Coli absent <input type="checkbox"/> Fecal absent			
SEE REVERSE SIDE OF GREEN COPY FOR EXPLANATION OF RESULTS					
LAB NO. 089 61945		DATE, TIME RECEIVED 4-6-02 8AM		RECEIVED BY UJO	
DATE REPORTED 4-7-02		ROUTE		ACCT. # AA004R	

Arcadia Drilling, Inc.

Customer: Canal View Tracts
310713 Hwy 101
Brinnon, WA 98302
Contact: Dave Anderson/ Dick Wasson

Phone: (253) 852-3687 Dave
Phone: (206) 242-2072 Dick
Fax:
E-mail:
Cell:

Project: Deep Well Drill and Test

Date of Test: 4/5 - 4/6 2002

Should be 44 per conversion
w/ Bill Neal on 5/22/02
S m Cullen

Pump Test Data:

All Measurements are from top of casing

Recovery Data:

TIME	gallons per min. GPM	foot-10ths LEVEL
10 Sec.	40	3.3
20 Sec.	40	6.0
30 Sec.	40	9.3
40 Sec.	40	16.0
50 Sec.	40	20.0
60 Sec.	40	24.2
70 Sec.	40	28.6
80 Sec.	40	31.9
90 Sec.	40	35.0
100 Sec.	40	38.0
110 Sec.	40	40.8
2 Min.	40	42.9
2.5 Min.	40	50.9
3 Min.	40	56.3
3.5 Min.	40	61.5
4 Min.	40	65.7
4.5 Min.	40	69.7
5 Min.	40	72.9
6 Min.	40	78.5
7 Min.	40	82.5
8 Min.	40	86.2
9 Min.	40	89.0
10 Min.	40	91.2
11 Min.	40	93.3
12 Min.	40	94.8
13 Min.	40	95.7
14 Min.	40	97.1
15 Min.	40	98.1
20 Min.	40	101.1
25 Min.	40	102.9
30 Min.	40	104.3
35 Min.	40	105.4
40 Min.	40	106.2
45 Min.	40	107.6
50 Min.	40	108.4
60 Min.	40	109.4
70 Min.	40	110.4
80 Min.	40	111.2
90 Min.	40	111.9
100 Min.	40	112.6
130 Min.	40	114.3
160 Min.	40	116.5
190 Min.	40	118.1
220 Min.	40	119.0
250 Min.	40	120.3
280 Min.	40	121.4
5 Hr.	40	122.6
6 Hr.	40	124.0

TIME	gallons per min. GPM	foot-10ths LEVEL
7 Hr.	40	125.7
8 Hr.	40	127.5
9 Hr.	40	128.5
10 Hr.	40	129.6
11 Hr.	40	131.0
12 Hr.	40	132.2
13 Hr.	40	133.5
14 Hr.	40	135.6
15 Hr.	40	136.4
16 Hr.	40	137.6
17 Hr.	40	138.5
18 Hr.	40	139.6
19 Hr.	40	140.3
20 Hr.	40	140.9
21 Hr.	40	141.8
22 Hr.	40	143.0
23 Hr.	40	143.9
24 Hr.	40	144.9
25 Hr.	40	147.8
26 Hr.	40	149.9
27 Hr.	40	151.9
28 Hr.	40	152.6
29 Hr.	40	153.4
30 Hr.	40	154.2
31 Hr.	40	155.4
32 Hr.	40	156.0
33 Hr.	40	156.5
34 Hr.	40	157.0
35 Hr.	40	157.5
36 Hr.	40	158.0
37 Hr.	40	158.8
38 Hr.	40	159.4
39 Hr.	40	160.1
40 Hr.	40	160.6
41 Hr.	Pump Off at 40 Hrs.	
42 Hr.		
43 Hr.		
44 Hr.		
45 Hr.		
46 Hr.		
47 Hr.		
48 Hr.		
49 Hr.		
50 Hr.		
51 Hr.		
52 Hr.		
53 Hr.		
54 Hr.		

TIME	foot-10ths LEVEL
10 Sec.	149.0
20 Sec.	
30 Sec.	137.0
40 Sec.	
50 Sec.	125.0
60 Sec.	121.0
2 Min.	113.0
3 Min.	105.0
4 Min.	99.5
5 Min.	92.8
6 Min.	88.1
7 Min.	83.7
8 Min.	81.0
9 Min.	79.3
10 Min.	77.4
11 Min.	76.1
12 Min.	75.0
13 Min.	74.0
14 Min.	73.2
15 Min.	72.8
20 Min.	70.5
25 Min.	69.0
30 Min.	67.8
1 Hr.	62.9
2 Hr.	59.1
3 Hr.	53.5
4 Hr.	51.0
5 Hr.	49.4
6 Hr.	47.8
7 Hr.	46.4
8 Hr.	45.2
9 Hr.	43.9
10 Hr.	43.2
11 Hr.	42.9
12 Hr.	41.8
15 Hr.	
16 Hr.	
17 Hr.	
18 Hr.	
19 Hr.	
20 Hr.	
21 Hr.	
22 Hr.	
23 Hr.	
24 Hr.	28.6
36 Hr.	
48 Hr.	
72 Hr.	12.5

SWL: flow 5.5 gpm
Artesian psi 22 PSI
Date: 4/15/2002 (tax day)

Notes: Water was clear and turbid free throught the test. Samples for
Chloride and Conductivity were taken at 60 min., 12 Hrs. and 40 Hrs.
IOC, VOC, Radionuclides, and Coliform Bacti. was taken at 24 hours

170 SE Walker Park Road Shelton, WA 98584
(360) 426-3395 voice (360) 426-1455 fax

Beach Club House Lane Water System (#1196M) - Source Approval
16 December 2002

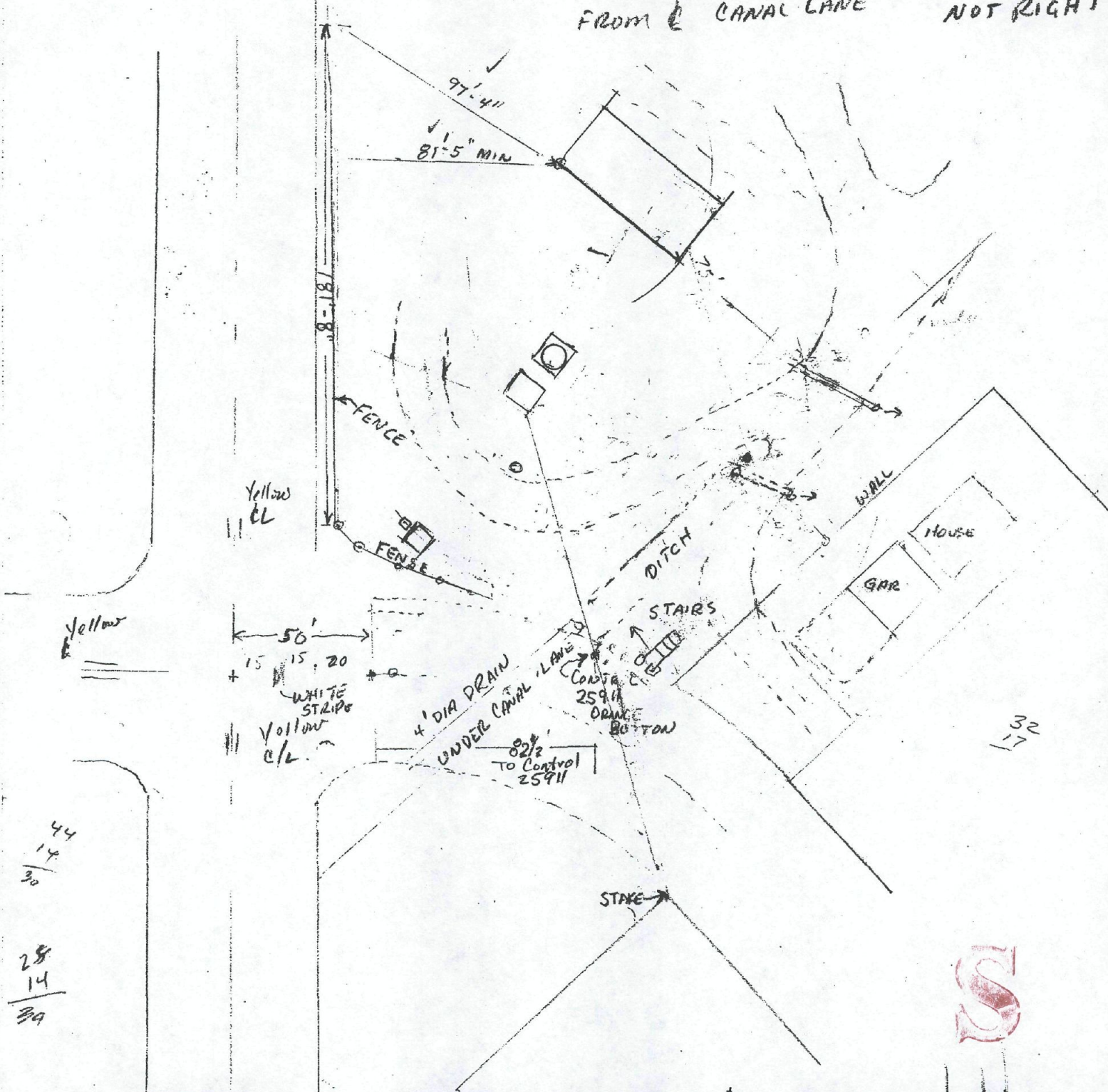
Enclosure 15 (Construction Details)

1. The purpose of this inclosure is to provide information on the pump and well head.
2. TDH.
 - A. Static Head. Assume that pumping the well stabilizes at 150 feet. Assume that the storage tank is 25 feet higher than the well head. Total Static head. 175 feet.
 - B. Dynamic Head. Assume flow of 32 gpm in a 1 1/2 inch plastic riser pipe (from practical engineering information use 16.9 feet for every 100 feet for 150 feet is 25 feet of lost.
 - C. Misc head lost between well site- pump house - and water tank, assume 10 feet.
 - D. TDH approximately 210 feet.
3. Pump Selection. The steep draw down condition would indicate that a pump with a flat pump curve would best fit this situation. A flow-regulating valve should also be installed in line to prevent any up thrust damage to the pump. Enclosed are pump recommendation from the driller. 2HP submersible pump.
4. The new well will be plumbed into the existing system. The well will use a pitless adapter, with required vent and access. A new check valve will be installed inside of the pump house and on top of the pump. Other controls, booster pumps, meters, chlorination, and pressure tanks will be existing system facilities.
5. The pump will operate off of existing floats located in the water tank.
6. The new pump will have a separate breaker installed in the existing exterior panel to power the new pump submersible pump.

NOTE

DISTANCES TO
Fence &
IRON STAKE
NOT RIGHT

RE SURVEY
PUMP HOUSES
FROM CANAL LANE

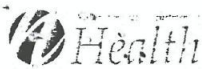


ENGR.			REVISED	DATE	SCALE - 1" = 50'	
CHECK						
APR						
APR						
					BOEING	

ENCL 9 - PROJECT LOCATION







Environmental Health

WATER FACILITIES INVENTORY (WFI)

Read Instructions on back before completing

DATE UPDATED: 09/03/02

UPDATED

DATE UPDATED: 08/25/02

STEM ID NO.	2. COUNTY	3. TYPE	4. AREA
11196M	JEFFERSON	A	ENC 16
3. SYSTEM NAME			
BEACH CLUB HOUSE CANAL LANE			
ADDITIONAL ROUTING INFO			
MAILING ADDRESS			
151 E LEISURE LANE			
CITY	STATE	ZIP CODE	
GRAPEVIEW	WA	98546-9717	
4. OWNER'S NAME (LAST, FIRST)			
OLYMPIC CANAL MAINTENANCE			
ADDITIONAL ROUTING INFO			
ATTN BILLI MEIRNDORF			
MAILING ADDRESS			
310703 HWY 101			
CITY	STATE	ZIP CODE	
BRINNON	WA	98320	
5. SYSTEM CONTACT PERSON			
DREW NOBLE - SMA 140			
DAY TELEPHONE			
360-427-0654			
EVENING TELEPHONE			
360-427-1406			
6. OWNERSHIP (CHECK ONE ONLY)		7. PREDOMINANT CHARACTERISTIC (CHECK ONE ONLY)	
<input checked="" type="checkbox"/> PRIVATE: NON-PROFIT		<input type="checkbox"/> RESIDENTIAL	
<input type="checkbox"/> PRIVATE: FOR-PROFIT		<input checked="" type="checkbox"/> RECREATIONAL	
<input type="checkbox"/> LOCAL GOVERNMENT (COUNTY / CITY / PUD / WATER DISTRICT)		<input type="checkbox"/> BUSINESS/INDUSTRIAL / AGRICULTURAL / COMMERCIAL	
<input type="checkbox"/> STATE		<input type="checkbox"/> LODGING / FOOD SERVICE	
<input type="checkbox"/> FEDERAL		<input type="checkbox"/> SCHOOL / DAY CARE	
		<input type="checkbox"/> OTHER (CHURCHES, ETC.)	

WFI UPDATED OR COMPLETED BY		TITLE	
DAY TELEPHONE		DATE	
8. SUBMITTED FOR	NEW SYSTEM	NO CHANGE	REACTIVATE
	SYSTEM NAME CHANGE*	UPDATE	DELETE
*OLD SYSTEM NAME - ENTER ONLY IF CHANGING WITH THIS WFI			
SYSTEMS SERVING ANY RESIDENTS (PEOPLE LIVING IN A DWELLING SERVED BY THE SYSTEM), COMPLETE THIS SECTION			
9. NUMBER ACTIVE RESIDENTIAL CONNECTIONS		10. NUMBER ACTIVE RESIDENTIAL POPULATION	
5		7	
SYSTEMS SERVING ANY NON-RESIDENTS (I.E. TRAVELERS, EMPLOYEES, STUDENTS, ETC.), COMPLETE THIS SECTION			
11. NUMBER NON-RESIDENTIAL CONNECTIONS			
27			
12. ENTER AVERAGE DAILY NON-RESIDENTIAL POPULATION SERVED FOR EACH MONTH. MAKE ENTRY FOR EACH MONTH.			
JAN.	4	APR.	8
FEB.	4	MAY	14
MAR.	8	JUNE	14
		SEP.	12
		OCT.	12
		NOV.	4
		DEC.	4
13. DOES THE SYSTEM SERVE AT LEAST 25 OF THE SAME NON-RESIDENTS FOR 4 OR MORE DAYS PER WEEK FOR AT LEAST 180 DAYS PER YEAR?			
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
14. TOTAL NUMBER OF SERVICE CONNECTIONS METERED		15. DISTRIBUTION RESERVOIR(S) TOTAL CAPACITY	
1		5,000 GALLONS	

16. DOH SOURCE NUMBER	17. SOURCE NAME	18. SOURCE CATEGORY	19. USE	20. TREATMENT	22. WELL DEPTH	23. SOURCE CAPACITY	24. SOURCE LOCATION	SWTR EVALUATION	VOC EVALUATION												
	LIST UTILITY'S NAME FOR SOURCE. IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S ID# AND NAME USING FOLLOWING FORMAT: XXXXXX / NAME EXAMPLE: 77050Y / SEATTLE	WELL WELL FIELD SURFACE SPRING RANNEY / INF. GAL. INTERIE PURCHASE-TREATED PURCHASE-UNTREATED	PERMANENT SEASONAL EMERGENCY	SOURCE METERED NONE CHLORINATION FILTRATION FLUORIDATION OTHER	(FEET)	(GPM)	1/4, 1/4 SEC. SEC. NO. TWP RNG.														
S01	ACQ541 WELL 1	(W)	X	X	66		NE/SW 21 25N 02W														
S02	WELL #2	INACTIVE	08/11/1994																		
S03	WELL #3	INACTIVE	08/09/1994																		
S04	WELL #4	INACTIVE	08/09/1994																		
S05	WELL #5	(W)	X	X	63		NE/SW 21 25N 02W														
S06	WF S01 & S05	X	X	X	63	12	NE/SW 21 15N 02W														
MINIMUM REQUIRED BACTERIOLOGICAL SAMPLING SCHEDULE																					
25.		25.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC							
*			0	0	0	0	0	0	0	0	0	0	0	0							
3. APPROVED SERVICES (PER PLANS)										5											
SYSTEM IN CRITICAL WATER SUPPLY SERVICE AREA?										YES		NO		GW MGMT AREA?		YES		NO		FOR LHD USE ONLY	
EFFECTIVE DATE RETRO. CHANGES										SIGNATURE OF DOH REVIEWER										DATE	

Advertising Receipt

Leader
226 Adams Street
Port Townsend, WA 98368
Phone: (360) 385-2900
Fax: (360) 385-3422

Washington State Dept of Ecology
Water Resources
PO Box 47775
Olympia, WA 98504-7775

Cust#: 01100442 000
Ad#: 04505393
Phone:
Date: 11/01/01

Ad taker: ap Salesperson: Classification: 990

Description	Start	Stop	Ins.	Cost/Day	Surcharges	Total
01 Leader	11/07/01	11/14/01	2	45.12		90.25

Payment Reference:

Credit Card Number:

Credit Card Expiration:

Credit Card Verification #:

Credit Card Verification Amt: 0.00

Total: 90.25

Tax: 0.00

Net: 90.25

Prepaid: 0.00

Total Due 90.25

State of Washington
Department of Ecology
notice of application to appropriate public
water

TAKE NOTICE: That Olympic Canal Maintenance Corp of Brinnon, Washington February 27, 1998,
under Application No. G2-29605 fled for a permit to appropriate public waters, subject to existing
rights, from four wells in the amount of 40 gallons per minute as needed year round each year for
multiple domestic supply. The source of the proposed appropriation is located within the NW 1/4 SE

THIS ITEM WAS PAID BY M/C 53000294
0890 0004

DAVE ANDRESEN 253-852-3687



**STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
NOTICE OF APPLICATION TO
APPROPRIATE PUBLIC
WATER**

TAKE NOTICE: That Olympic Canal Maintenance Corp of Brinnon, Washington February 27, 1998, under Application No. G2-29605 fled for a permit to appropriate public waters, subject to existing rights, from four wells in the amount of 40 gallons per minute as needed year round each year for multiple domestic supply. The source of the proposed appropriation is located within the NW 1/4 SE 1/4 Section 21, T. 25 N., R. 2 W. W.M., of Jefferson County, Washington. Protests of objections to approval of this application must include a detailed statement of the basis for objection; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, at the address shown below, within thirty (30) days from November 14, 2001.

Department of Ecology, SWRO
PO Box 47775
Olympia, Washington 98504-7775
5393 11/14

S



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

October 25, 2001

Dave Andresen
Beach Club House Canal Lane
20538 97th Avenue South
Kent, WA 98031

Dear Mr. Andresen:

Re: **Preliminary Permit to Drill and Test a Well Under Application No. G2-29605 for Olympic Canal Maintenance Corp.**

The application requested the withdrawal of public ground water at a rate of 40 gallons per minute (gpm) for multiple domestic supply. The well site is located within the NW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 21, T. 25 N., R. 2 W.W.M., of Jefferson County. Presently, it appears that your intent is drill a new well which would replace your existing wells. The conditions in this preliminary permit assume that scenario and thus describe testing for the new well. If use of some or all of your existing wells is anticipated in conjunction with your new well, please contact Ecology to see what multiple well testing might be required.

The Department of Ecology's goal is to prevent seawater intrusion rather than deal with it after the fact. The Water Quality Standards for Ground Waters of Washington State (Chapter 173-200 WAC) and other statutes grant Ecology authority to make water right decisions based upon seawater intrusion potential. Unless it can be proven that your proposed withdrawal will not lead to seawater intrusion, your water right application will be denied.

You are hereby granted a Preliminary Permit to proceed with drilling and testing of the well. **It is important to note that you must comply with the conditions of this Preliminary Permit within the time period specified or else the application upon which it is based shall be automatically canceled. Please make sure that your consultant and/or driller receive(s) a copy of this Preliminary Permit to ensure compliance with all conditions.** Also, please check with the Jefferson County Health Department to determine whether well site approval is required prior to well construction. This letter serves as a Preliminary Permit subject to existing rights and the following conditions:

1. This Preliminary Permit will remain in effect until November 1, 2002, unless sooner revoked by Ecology.
2. All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under chapter 18.104 RCW (Washington Water Well Construction Act of 1971) and chapter 173-160 WAC



(Minimum Standards for Construction and Maintenance of Water Wells).

3. In accordance with WAC 173-160-205 wells shall not be located within certain minimum distances of potential sources of contamination. In general, wells shall be located at least 100 feet from a sewer, septic tank, privy, or other source of contamination. Wells shall not be located within 1,000 feet of a solid waste landfill. Minimum distances shall also comply with state and local health regulations.
4. An access port shall be installed and maintained. In order to facilitate accurate recovery data collection, the system shall incorporate backflow check-valve(s) that will prevent water from flowing back into the well when the pump is shut off.
5. The well shall be tested at a **constant rate** no less than the maximum design rate at which the well source will be used. The Washington State Department of Health (DOH) Water System Design Manual (DOH #331-123, June 99), Appendix E provides guidelines for designing and conducting the aquifer test (available at www.doh.wa.gov/ehp/dw). For water table aquifers, pumped water produced during the test shall be routed away from all wells and discharged such that this water will not recharge the drawdown cone during the test.

Pumping during the test shall be conducted for a **minimum** of 24 hours, with stabilization of the pumping well water level occurring for at least the last four of those hours. Stabilization is defined as a drop in water level of less than or equal to 0.1 foot drawdown per hour during pumping. Depth to water shall be measured in feet, using 10ths and 100ths of a foot rather than inches.

At the completion of pumping, recovery data shall be collected from the well until the pumped well nears pre-pumping static conditions and the water level recovery rate is less than 0.1 foot per hour.

6. The following water quality sampling and analyses will be used by Ecology when evaluating your application. **Please be aware that the state or county health department may require additional testing prior to the approval of your project. If your project involves a public water system, please check with the appropriate health agency to determine what additional testing is required prior to conducting the test.** All water sample analyses conducted pursuant to this Preliminary Permit shall be performed by a laboratory accredited by the Washington State Department of Ecology.

Ground water sampling and analysis shall occur as follows:

- In order to evaluate the potential for seawater intrusion, (3) ground water



samples from the pumped well shall be analyzed for chloride and conductivity. These samples shall be collected at the following intervals:

- one (1) sample during the initial 30 to 60 minutes of pumping,
 - one (1) sample approximately mid-way through pumping, and
 - one (1) sample within the last 15 minutes of pumping.
- Please check with the State Department of Health for their additional sampling and analysis requirements.
7. When aquifer testing is completed, the data shall be compiled into a report. This report shall be submitted to the Ecology, Southwest Regional Office and shall include the following:
 - a. A well construction report (well log) for the pumping well which includes the total depth, the screened interval depth(s), and the pump intake depth.
 - b. Land surface elevation for the pumping well and method used for determining.
 - c. A legible table including the pumping rate and all water measurement data collected during pumping and recovery.
 - d. A copy of all laboratory test results.
 8. In addition to the above, a complete water well report for the well shall be submitted by the driller to Ecology within thirty (30) days of completion.
 9. These test results are needed in order to properly analyze the effects of the proposed pumping. Failure to follow correct methodology such as that outlined in the DOH guidelines, may be reason to require that the aquifer testing be repeated.
 10. All expenses, risks, and liabilities incurred during well testing shall be borne by the applicant. If senior water right holders are adversely affected during any portion of the aquifer test, the test shall be terminated immediately.
 11. This Preliminary Permit grants the right to use this well for testing purposes only. No further use will be allowed from the well except as authorized under the accompanying TEMPORARY PERMIT. Approval will not be considered until the above conditions have been met.
 12. The granting of this Preliminary Permit shall not be construed, by inference or

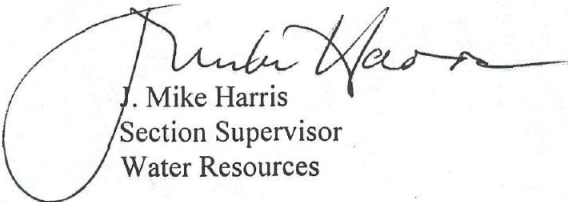


otherwise, that subject application will ultimately be approved. If the applicant fails to comply with the terms of this Preliminary Permit, it and the application upon which it is based, will be automatically canceled.

Any person seeking to appeal this action must submit a written request, within 30 days of receipt of this order, to the Washington Pollution Control Hearings Board (4224 6th Avenue SE, Building 2, P.O. Box 40903, Olympia, WA 98504-0903). At the same time, send a copy of the appeal to the Director of the Department of Ecology (P.O. Box 47600, Olympia, WA 98504-7600). These procedures are consistent with those of the Environmental Hearings Office, Pollution Control Hearing Board (Chapter 43.21B RCW and its implementing regulations).

Should you have any questions regarding this Preliminary Permit please contact Marie Peter at (360) 407-0279. For questions regarding testing procedures or requirements, please contact Tom Culhane at (360) 407-0297.

Sincerely,



J. Mike Harris
Section Supervisor
Water Resources

JMH:MP:th

Cc: Jerrod Davis
Olympic Canal Maintenance Tracts office
File #G2-29605





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

October 25, 2001

Dave Andresen
Beach Club House Canal Lane
20538 97th Avenue South
Kent, WA 98031

Dear Mr. Andresen:

Re: Permit for **Temporary Use of Water** in Conjunction with Water Right Application No. G2-29605 for Olympic Canal Maintenance Corp.

On February 27, 1998, Olympic Canal Maintenance Corp. applied for a permit to appropriate public ground water in the amount of 40 gallons per minute. Olympic Canal Maintenance Corp. currently serves three full-time and 42 recreational connections within Olympic Canal Tracts Addition No. 1. Although the system has two wells, the combined yield of these wells is only 3-4 gallons per minute. The State Department of Health has determined that the source capacity is inadequate for this system and has "red-tagged" the system.

Olympic Canal Maintenance Corp. has authorization to construct and test an additional well within the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 21, T. 25 N., R. 2 W.W.M. under a preliminary permit issued by Ecology. Because inadequate source capacity poses a threat to public health for existing residents, Ecology is authorizing the temporary use of ground water from the new well. **This letter serves as temporary authorization for the use of the well, and is subject to the following conditions:**

1. The effective date of this temporary permit is October 25, 2001.
2. The instantaneous withdrawal rate shall not exceed 40 gallons per minute.
3. Use of water under this temporary permit shall be limited to serving existing connections within Olympic Canal Tracts Addition 1.
4. The maximum amount of water withdrawn under this permit shall not exceed an average of 5,000 gallons per day, or 5.6 acre-feet per year.
5. The water appropriated under this application will be used for public water supply. The State Board of Health rules require public water supply owners to obtain written approval from the Office of Water Supply, Department of Health, 1112 SE Quince Street, PO Box 47890, Olympia, Washington 98504-7890, prior to any new construction or alterations of a public water supply system.

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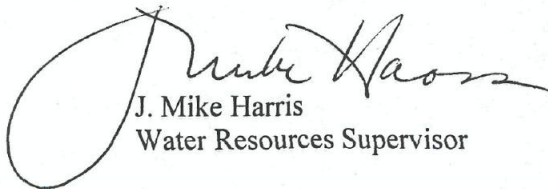
6. An approved metering device shall be installed and maintained in accordance with RCW 90.03.360, 90.44.450 and WAC 508-64-020 through -040, and WAC 508-12-030. Meter readings shall be recorded at least monthly.
7. Installation and maintenance of an access port as described in Chapter 173-160 is required. An air line and gauge may be installed in addition to the access port.
8. Withdrawals authorized under this permit may be subject to regulation, if necessary, to protect existing rights.
9. This temporary permit expires on October 24, 2004, or upon issuance of a formal water right permit under Application No. G2-29605. This authorization may be extended if a written request justifying an extension is made at least 30 days prior to expiration.

This permit is subject to revocation if Olympic Canal Maintenance Corp. fails to comply with any of the conditions specified above. In issuing this temporary permit, the Department of Ecology in no way guarantees that a formal permit will be granted to withdraw water from this well.

This order may be appealed. Your appeal must be filed with the Pollution Control Hearings Board, PO Box 40903, Olympia, WA 98504-0903 within thirty (30) days of the date this Order was mailed by the Department of Ecology. At the same time a copy of your appeal must be sent to the Department of Ecology, c/o Appeal Coordinator, PO Box 47600, Olympia, WA 98504-7600. Your appeal alone will not stay the effectiveness of this order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

If you have any questions concerning this authorization, please call Marie Peter at (360) 407-0279.

Sincerely,



J. Mike Harris
Water Resources Supervisor

JMH:MP:th

Cc: Jerrod Davis, Department of Health
Olympic Canal Maintenance Corp office
File No. G2-29605





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

October 25, 2001

Dave Andresen
Beach Club House Canal Lane
20538 97th Avenue S
Kent WA 98031

Dear Mr. Andresen:

Re: Water Right Application No. G2-29605

We have received your application for appropriation of water and it has been assigned the number referenced above. If you contact us in the future regarding this application, it will help us serve you more quickly if you refer to this application number.

Please complete the following two steps:

1. Enclosed is a notice of your application, which must be published once a week for two consecutive weeks in a newspaper published in **Jefferson County**. The newspaper should have general circulation in the locality where the water is to be diverted and used, and must be qualified as a legal newspaper. Publishing the notice in a remote part of the county, when not necessary, may be cause for you to be required to republish the notice in a designated newspaper. The enclosed newspaper list may help you select an appropriate newspaper for the area.

Publication should start within 30 days from the date of this letter.

To assure accuracy, it is your responsibility to check the notice carefully before having it published. If you find an error, please contact this office for correction and/or resolution. If we later find an error in your public notice, you will be required to re-publish an amended notice at your expense.

2. After publication, the publishing newspaper should provide you with a notarized original Affidavit of Publication, which should be forwarded to our office as soon as possible. Please do not send a photocopy of the affidavit.

Community water systems are required to be approved by either the local health department or the Department of Health depending upon system size. If you have not already done so, we suggest that you contact either your local health department or the Department of Health, Southwest Drinking Water Operations, Thurston Airdustrial Center, Bldg 3, PO Box 47822, Olympia, Washington 98504-7822 for further information.

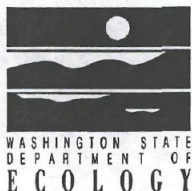
If you have any questions or concerns about any of this information, please call (360) 407-0240. Thank you for your attention to this matter.

Sincerely,

Sheri Carroll
Water Resources Program

SC:th (affidavit of publication.doc)





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That Olympic Canal Maintenance Corp of Brinnon, Washington on February 27, 1998, under Application No. G2-29605 filed for a permit to appropriate public waters, subject to existing rights, from four wells in the amount of 40 gallons per minute as needed year round each year for multiple domestic supply. The source of the proposed appropriation is located within the NW¼ SE¼ Section 21, T. 25 N., R. 2 W.W.M., of Jefferson County, Washington.

Protests of objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar (\$2.00) recording fee and filed with the Department of Ecology, at the address shown below, within thirty (30) days from: _____ (Last date of publication to be entered above by publisher)

NOTICE MUST BE PUBLISHED ONCE A WEEK FOR TWO CONSECUTIVE WEEKS

Department of Ecology, SWRO
PO Box 47775
Olympia, Washington 98504-7775

ECY 040-1-1
Rev 2/79

Notice

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STATE OF WASHINGTON
DEPARTMENT OF HEALTH
SOUTHWEST DRINKING WATER OPERATIONS
2411 Pacific Ave. • P.O. Box 47823 • Olympia, Washington 98504-7823
(360) 664-0768 • FAX (360) 664-8058
TDD Relay 1-800-833-6388

October 4, 2001

Dave Andresen
Beach Club House Canal Lane
20538 97th Avenue South
Kent, Washington 98031

Dear Mr. Andresen,

Subject: Beach Club House Canal Lane (aka Olympic Canal Tracts) Water System, ID #11196M, Jefferson County; Existing System Approval and New Source Approval Process, Group A Transient Non-Community (TNC) Water System

I would like to thank you, the Beach Club House Board Members, and Jim Parker of Jefferson County Public Utility District (PUD) for meeting with me on August 30, 2001 to discuss the status of the Beach Club House Canal Lane (BCHCL) water system and the steps required to bring your water system into substantial compliance.

As you know, your water system has been placed in an inadequate status (RED Operating Permit) due to several reasons. Jefferson County Environmental Health Department (EHD) found deficiencies during a routine Sanitary Survey conducted on November 20, 1999. A Bilateral Compliance Agreement (BCA) was then issued on February 9, 2000, outlining corrections needed to be made to the water system. The BCA required that a sanitary control area be documented, wellhead improvements be made, a coliform monitoring plan be generated, water quality sampling be conducted, and a disinfection system be installed. As of this date, DOH has received documentation from Jim Parker of Jefferson PUD for all of the items contained in the BCA. However, remaining issues of concern to the Department of Health (DOH) are inadequate source capacity and the lack of water rights.

Jefferson PUD's analysis of the system indicated that both of the existing wells are experiencing decreased source capacity (i.e., from a capacity of 12 gallons per minute [gpm] to less than 7 gpm). Even with the existing storage capacity, peak demands are most likely not being met to

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Dave Andresen
Page 2
October 4, 2001

serve the existing five (5) residential and twenty-seven (27) non-residential connections. Based on this information, additional source capacity is required.

One way to increase source capacity is to drill a new well. However, without any water rights, the only way to drill a new well is to drill an EXEMPT well. The water usage from an EXEMPT well cannot exceed more than 5,000 gallons per day (gpd). Based on water usage records from your water system, it appears that the water usage is less than 5,000 gpd. It is my understanding that you applied for water rights to the State Department of Ecology (DOE). If you choose to drill an EXEMPT well, particularly if the new well is deeper than the existing wells, you must consult with DOE as soon as possible regarding your existing water right permit application. Drilling an EXEMPT well that is deeper than your existing wells may change the status of your existing permit application. In addition, drilling an EXEMPT well would require that you record water usage readings as frequently as possible (daily readings if possible) to verify that water usage is less than 5,000 gpd.

Once the BCHCL water system improves the source capacity, DOH can change the Operating Permit from RED to GREEN AT CAPACITY. At Capacity means that your water system will be placed in an adequate status to serve the existing five (5) residential and twenty-seven (27) non-residential connections. Converting non-residential connections to residential connections will not be permitted until adequate water rights are obtained.

I look forward to working with you to bring your water system into substantial compliance. Please do not hesitate to call me regarding this letter or your water system at (360) 586-2510.

Sincerely,



JERROD L. DAVIS, P.E.
WSDOH Regional Engineer

cc: Russ Austin, Manager, Beach Club House Canal Lane
Larry Fay, Jefferson County Environmental Health
Jim Parker, Jefferson County PUD
Marie Peter, WSDOE



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

April 3, 1998

Dear Water Right Applicant:

Re: Water Application No. G2-29605

We have received your application for a water right and have assigned the application number indicated above. It would help us if you referred to it by number in future correspondence.

Due to a shortage of staff to meet the demand for service, new applications are being accepted and filed for future processing, but a public notice will not be sent at this time. Because we have approximately 5,000 pending applications for water rights statewide, it may be some time before we can get to your application. When we begin processing your application, we'll prepare a public notice and send it to you with publication instructions. It is very important that you notify us of any change of address or ownership of the property; or, if your plans for water use change.

We are working on the oldest applications on file as quickly as we are able. We are also looking for ways to speed up decision making. Please keep in mind that filing an application for water use does not authorize use of the water. With the many complexities of water law, including issues such as senior rights, fish habitat, and instream flows, favorable permit decisions are not always possible. I regret that a decision on your application cannot be made sooner and strongly advise against investing further in your project unless you are issued a water right permit.

I apologize that this is the best we can do currently. To better manage limited staff time, we have set the following office hours:

Telephone Calls

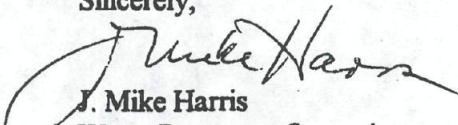
Mondays and Wednesdays
8:00 am to 4:00 pm

Walk-ins

Tuesdays and Thursdays
8:00 am to 12:00 (noon)

We will respond to your questions and concerns as soon as possible. Thank you for your continued patience.

Sincerely,


J. Mike Harris
Water Resources Supervisor

JMH:th (ackapp.doc)

